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ABSTRACT

The following 12 papers in this report from the Association of Research Libraries (ARL) address management and preservation of research library resources, access to information resources, scholarly communication, research collections, and information policies: (1) "Management Issues That Keep Directors Awake at Night: (Joanne Euster); (2) "ARL Statistics: Nightmares or Pleasant Dreams?" (Irene Hoadley); (3) "Funding Preservation Programs in ARL Libraries: Strategies for the 1990s" (William J. Studer); (4) "Financing a New Preservation Program" (Paul Willis); (5) "Strategies for Increasing Productivity" (Scott Bennett); (6) "Strategies for Reducing the Preservation Budget" (Joseph Rosenthal); (7) "The Future of Congress' Mass Deacidification Plans" (Kenneth Harris); (8) "Evolution of Electronic Resource Sharing: A White Paper" (Nancy Eaton); (9) "University Presses and ARL Libraries: Partnerships and Collaborations" (Richard De Bacher); (10) "Technologically-Enhanced Article and Document Delivery Systems: New Services and Their Effect on Research Libraries" (Michael Gannon); (11) "Determining Values Related to Collection Development in Research Libraries" (Harold Billings); and (12) "Government Information in Electronic Format: Case Studies" (Merrily Taylor). This report also includes ARL program updates from the Office of Management Services, Office of Scientific and Academic Publishing, and the Coalition for Networked Information; strategic forum reports; reports on foundation trends in the 1990s; and minutes of the business meeting. Appendices contain a report on association activities; an attendance list and index of persons; lists of officers and members of the Board of Directors, committees, and task forces; and a membership directory. (BBM)

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Minutes of the 119th Meeting

October 23-25, 1991
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Association of Research Libraries
119th Membership Meeting

Washington , DC
October 23-25, 1991

Building A New Agenda:

Economic Pressures, Technological Innovation, and Access to Information

Marilyn Sharrow, *Presiding*

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FOREWORD

Within ongoing budgetary and institutional constraints, what are the specific challenges and needs that research libraries must continue to meet? The program of the Association of Research Libraries 119th Membership Meeting addressed these questions and encouraged directors to analyze issues, share approaches to specific situations, and describe new services, technologies, and philosophies.

Each session of the three-part program featured two concurrent group discussions led by members of ARL committees, presenting ideas and moderating debates on current aspects of the topics that comprise the ARL agenda: collection development, information policy, access to information, scholarly communication, preservation, technology, and management. The sessions incorporated unique formats such as small group analysis, opinion surveys, and position papers.

The first two concurrent group discussions were led by the Management and Preservation committees. The Committee on the Management of Research Library Resources explored the theme, "What keeps you awake at night," and discussed what ARL can do to help you sleep more soundly. The topic of the Preservation of Research Libraries Materials Committee was Funding of Preservation Programs. Three ARL directors presented a panel discussion on issues such as program implementation, factors for increasing productivity, financial management, and mass deacidification.

The second pair of discussions were conducted by the Scholarly Communication Committee and the Access to Information Resources Committee. The Scholarly Communication Committee's forum focused on research library alliances with university presses, including faculty in scholarly communications, and the move to sophisticated document delivery services from the library vendor community. The Committee on Access to Information Resources lead a debate based on a white paper of key issues, in particular addressing the notion of a distributed national library network.

The Committee on Research Collections and the Information Policies Committee conducted the final set of discussions. The Committee on Research Collections generated a debate on broad collections policies through a "collections values exercise," in which participants ranked and evaluated important collections issues. The Information Policies Committee discussed existing strategies in the delivery of and access to government information in electronic format. Issues of cost, training, and software development were explored in this forum.

These sessions together constituted a "strategy forum" for the Association to analyze current trends, share information about the impact of these trends on individual libraries, and assess the prospects for collective action through ARL programs and services.

GENERAL PROGRAM SESSION I

INTRODUCTION

MS. MARILYN SHARROW: Welcome to the 119th Meeting of the Association of Research Libraries. The program this week is designed to encourage discussion of emerging issues of concern to research libraries and to assess the current ARL initiatives and priorities. First, we have an update session focusing on three of the major ARL programs—OMS, OSAP, and CNI. Then, the ARL standing committees have organized a series of strategic forums focusing on a variety of topics. Summaries and proposals will be forthcoming from these forums and will be discussed in the Town Meeting at the close of the meeting. Guest speakers will highlight trends in publishing, information technology, and foundations. This structure is intended to provide ample opportunities for you to express your views, discuss the issues with your colleagues, and maintain an awareness of activities in the broader arenas in which we operate. I would now like to turn the program over to Duane Webster, who will moderate the first session.

MR. WEBSTER: I am pleased to have this opportunity to moderate a panel of three people who are highly committed and determined to advancing the interests of the research library community.

Each program officer will give a brief review of activities and talk about issues that will be coming up over the next three years. After the initial comments, we hope that you will take this opportunity to explore your particular interests or to examine areas in which you would like additional information. We chose these three programs to review this way, in part, because they are so active, they are so much involved with what you are doing, and they have been on your campuses. We think the rest of you would like to have a better sense of what they are doing, where they are going, and how they are doing it. In addition, it is our own sense that the scope and complexity of the issues that these three programs address are not adequately described in the written activity report that's provided to you at each of these meetings. We would like a chance to elaborate on them. And finally, we hope that by discussing these three programs at greater length at the beginning of this meeting, it will allow tomorrow's discussions to focus more on emerging interests and issues as identified by the ARL standing committees. In the past, we've followed a number of different formats for keeping you abreast of Association activity. We have had the federal relations update lunch; we have had "hot topic" discussion sessions; we have had reports at business meetings. I hope you find this format equally useful and informative.

I will begin with Susan Jurow. She is the Director of the Office of Management Services. She joined the ARL in 1985 as training program specialist. Her career assignments include work at Stanford University, the University of Houston and the University of California. She became Director of the OMS two years ago and has engineered, in a very short time, a refinement of the OMS fiscal structure. Even more notably, she has sparked the introduction, design, and development of a number of new training programs. One of the new programs is in the area of creativity, one in the area of Myers-Briggs Type Indicators, and one in the area of financial management skills. Currently she is working to put together a program that explores the management approach called total quality management.

Our next panelist is Ann Okerson, Director of the Office of Scientific and Academic Publishing. She joined the Association of Research Libraries about two years ago after working with the Jerry Alper Library Service Bureau and before that at Simon Fraser University on a variety of technical services assignments. Ann was one of the consultants ARL employed to address the serials pricing problem in 1988. She did so well with that assignment that we asked her to come to ARL and establish an ongoing program to understand better the stresses that are at work within the system of scholarly communication. In particular, we asked her to find ways to influence the evolution of scholarly communication so that it serves the interests of our institutions. Ann is currently serving as President of the North American Serials Interest Group (NASIG). She was elected by her colleagues as a person who is a leader on a collegial level as well as on an institutional level.

Our last panelist is Paul Peters. He is Director of the ARL/CAUSE/EDUCOM Coalition for Networked Information. I have known Paul for over a decade, having first worked with him as a participant in an OMS consultant training program while he was employed at Columbia University. Subsequently he worked with Susan and me at the Design and Analytical Skills Institute when I was working at the New York Public Library. Finally, we have found a way to bring him to Washington

to work with us in addressing a range of resource and information system problems and needs facing research universities. He has provided the staff leadership for the Coalition for Networked Information. He has done a truly extraordinary job in working with the leaders of CAUSE and EDUCOM and balancing the several constituencies that have a very strong stake in the future of information systems and resources. I also want to note that he has recently won recognition for his leadership on information technology issues with his election as President of the ALA Library Information and Technology Association.

Office of Management Services
Susan Jurow, Director

MS. JUROW: I am pleased to have the opportunity to address you. One of the things that happens when you're asked to do something like this is that you think a little bit about the last time you did something similar. I was thinking back to two years ago when Duane announced my appointment to Director of OMS and I had the opportunity to say a little bit about the Office. It allowed me to think about what has happened over the past two years, and the expression "bloody but unbowed" came to mind. It feels like the past two years have been spent trying to prove that perpetual motion really does exist.

Things are starting to relax a little bit in the OMS. We are coming through a period of a great deal of activity as we have tried to restructure and rethink what it is we are doing and how we are doing it while the people and the focus changed.

Things seem to run in about ten-year cycles. It is 20 years ago that the OMS was established. Ten years ago, the ARL membership decided to increase its dues to provide a larger subsidy to the OMS so it would not have to go outside of membership activities to support itself. Now we find ourselves looking at what we are doing and how we are doing it to see if the kinds of programs and services we offer are still the ones that you are interested in and that we are doing them in ways that are useful to you.

I would like to take a little bit of time to look back at how the programs have developed and to talk about where we are going with them.

Because we have been examining what we have been doing, we have been collecting a lot of data about the programs. When we look back about five or six years, we find that the number of institutes and large programs have increased from 12 to 18 on an annual basis. Now, because the number of public institutes that we do remains the same, this means that more of your institutions are sponsoring us to do workshops in your institutions or to have us come to you to bring together a number of libraries within a particular region.

The number of participants in each institute increased 30 percent over that same period of time. We have reached about 500 people a year through our institutes now. In our public institutes, one of the things that we are always very careful to look at is the ratio of ARL participants to non-ARL participants. We find that it has remained stable over the years, with about 75 percent of the people who attend the public institutes coming from the ARL libraries.

We had a steady increase in the publications area over the last five or six years, totalling about 15 percent. We feel comfortable with this, considering that this has been a time when a lot of libraries have cut their serials. We are finding that libraries are interested enough in the SPEC program to continue to subscribe, and we are finding more and more libraries taking second subscriptions. That way they can have one in the collection and another one either circulating or going to a particular program relating to the SPEC kit.

In the area of consulting, we've had somewhat of a mixed experience over the last five or six years. As interest has declined in existing programs, we have not had the time to develop a lot of other products that would be of interest to our members. The one program that we have put together was on strategic planning, and I would say that on an annual basis, we have presented that program between five and ten times every year since it was first developed about five or six years ago. So we find that in our three core programs, activity and participation by the ARL members is very, very strong.

We have new initiatives developing in all three of these areas. In the training area, this year we will be offering, for the first time, what we are calling Update Sessions. These are going to be programs that build on the Basic Management Skills Institute. We have developed two programs. One is a program that focuses on coaching and helps the manager or supervisor to improve staff performance. The program is going to be a workshop that looks at personal effectiveness. We will be dealing with issues such as time management and delegation—the kinds of things that managers need to know to work more effectively and to use their precious time effectively.

A departure from what we have done in the past is the required participation in the Basis Skills Management Institute before one can attend these workshops. We would like to be able to assume a certain level of knowledge and a certain common degree of experience when we are dealing with people in these two workshops, and we see them as building on the skills and background of the other institute.

One of the issues that is also key to us is the process of building the transfer of training process. We have tried to work over the years to develop strategies that ensure that participants carry as much of the workshop forward into the workplace as possible. Part of what we have done is to prepare materials before the participant comes to the workshop. This year we have also brought together a process for allowing participants time to consider what they are learning as they are learning it and time to think about practical applications during the workshop. This should make it easier for participants to apply what they are learning when they return to the workplace. We are continuing to work in that area.

We hope to get off the ground this year a program that personnel officers can use to teach managers how to send staff to training. It is a little convoluted, but one of the things that the literature about adult learning shows is that the most powerful interventions for increasing transfer of training is contact between the manager and the supervisee before the person is sent to training and after the person comes back from training. We think that we can help provide some guidelines, so that managers are sending people to training sessions with a clearer sense of what their expectations are.

In the publications area, one of the things that we have been trying to do since Brigid Welch began two years ago is to move from a publications program to an information services program in order to broaden the scope of the program. There are a couple of areas that we are working on there. We want to make the occasional paper series less occasional, to put that back on a schedule, so we have some research papers or "think pieces" that come out on a more regular basis.

Another thing we are looking into is the digitization of our publications. We are looking at this for a number of reasons. When we collect material from you for a SPEC kit, we only publish about 25 percent of what we get. We try to pick pieces that are either what we consider the best or are representative of the programs that we are trying to cover. We would like to be able to find a way to make a broader range of documentation on these topics available to you.

We are also looking into a new publication that would support the transfer of training. We would like to develop a publication dealing with management issues that we would make available to people who have attended our workshops and on a general basis. What we are really hoping for here is something in the area of innovations, new techniques and structures, things that people are doing in the management area.

In the consulting area, we are starting to think in terms of new products that we hope will enhance the kinds of management structures and programs that you already have in place. We are looking to develop programs that are modular and flexible in nature, where we can come in and provide you with a whole process. We can hand over the process to you and let you do it yourself, or we can provide you with workshops and allow you to run the process. The process should be applicable to the needs of your particular staff in your particular institution.

As Duane mentioned, we are looking to put together a program in the area of total quality management. I do understand that the whole issue of total quality management sounds like the newest fad, the newest buzz word, but I really believe that there are elements of the idea of quality improvement that can make a difference in the way libraries look at the programs and services that they offer. We are working with a visiting program officer this year to try to develop a project in this area.

As most of you know, we have been working in the area of cultural diversity for the past year. Kriza Jennings is in the process of completing research papers and looking at cultural diversity in higher education, industry, and in libraries. Kriza also did a series of 17 site visits around the country, in libraries, schools, and in some companies. Her insights into the whole issue of cultural diversity and how it is being addressed in the library community are very interesting. We are looking forward to making that information available to you.

We are also developing a needs assessment program in the area of training and staff development. It is our understanding that many of you see the need for increased funding for training. Rather than continuing to work on an ad hoc basis, we are interested in helping you to develop mini-strategic plans in the areas of training and staff development so that you are using your money in the most effective way possible. We hope we will have some inventories and processes that will allow you to do that within the next three to six months.

The last initiative, which is the fuzziest, is organizational structure. One of the things that I'm hearing from a number of directors is the questioning of the whole way the library is structured and whether the structure inhibits or facilitates the delivery of programs and services to our client groups. We are going to be looking at the issue of organization structuring and reorganizing to see if we can put together some tools and processes to help you look at this particular area.

To wrap up, ten years ago, the membership decided that they wanted to increase the subsidy to OMS to allow us to focus more on programs that the membership really wanted and needed. We have

used the subsidy to allow us to provide services at the lowest possible cost; the subsidy covers our overhead so that we can make our programs as inexpensive as possible for you. We put a great deal of time, effort and research into the development of our programs to ensure their quality. We realize that you are very interested in having things like total quality management and cultural diversity, but we want to make sure that the programs we make available really meet your needs.

The last time I had an opportunity to address you I thanked the membership for their support as their training officer in developing that whole area. I would like to thank you again for your participation in all of our programs.

The kind of growth we have experienced doesn't just happen. It comes from your interest in the programs that we are developing and through your help in letting us know that we are not only doing the right things, but that we are doing them the right way. We're interested in offering programs that meet your needs, and so we want to hear from you as much as possible as we are work through the program development process.

MR. WEBSTER: Thank you, Susan. You can see that under Susan's leadership the OMS services are not only robust and very active in supporting your interests, but they are also growing and changing. A fundamental element here is that this set of services is designed for you, and as she suggested, they are being redesigned to meet your new and emerging needs. Let me invite questions or comments that you would like to direct to Susan.

MS. VON WAHLDE: The fact that you are offering more programs, more individual training programs, for institutions is wonderful. I am personally experiencing a sort of anti-training backlash, and I don't know if that is typical of other places or if it is a particular cycle that we're in. But again, there is a sense on the part of staff that they are overloaded, they have been pushed, they don't want any more training even if it's offered for free or at a very low cost, and yet I don't hear you saying that in terms of your work with institutions.

MR. WEBSTER: Is training becoming an additional burden for our staffs out there?

MS. JUROW: I think that as we experience financial cutbacks, and as staff feel that they are having to do more with less, there is a great deal of stress out there. I would have to say that that is not something we have experienced. One of our measures for those kinds of issues has to do with resistance of people who come to the workshops. If people are forced or told to go, we can usually tell. They make that abundantly clear. One of the things that the group of consultants who works with us has discussed is changing this area. When I started in 1985, there were a fair number of people who resisted in every workshop I did. You could always identify them. You had to deal with it and then move on. One of the things that we have all noticed is that this has almost completely disappeared; the people who come to our workshops now appear to want to be there. They appear to want to learn. They are committed to that, so I would say that we are not seeing that backlash in the workshops we are doing.

MR. WEBSTER: At a Board discussion this week, several members reiterated the fundamental importance of staff training for this new electronic or parallel systems library that we are working into. As we move into an uncharted future, we must pump staff with new skills, new orientations, and new energy— it needs to be available to us. Many of those training staffs are already employed in our organization. We have got to find a way of moving them into this new environment. The Management Committee survey rated the need for training as one of the top activities that "keep you awake at night."

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Office of Scientific and Academic Publishing
Ann Okerson, Director

MS. OKERSON: Susan's OMS presentation reminds me of a story that someone once told me. A very busy Associate University Librarian (AUL) from a technical services area went to a stress management workshop, and she was so stressed that first morning from not getting to her work that she left and went back to the office.

The Office of Scientific and Academic Publishing was created directly by the ARL membership to address certain issues of scholarly publishing and literature that were vexing to the members and to the users of scholarly and research information on our campuses. Those issues are, and continue to be: the quality and quantity of academic literature, commercialization and cost, competition, monopoly and ownership. In support of those issues, there are three general strategies that we have been trying to follow.

1. The first strategy is to reach, educate, and build consensus among the broadest number of our constituents, particularly universities, learned societies, and individual scholars about the problems that libraries are facing in regard to

scholarly publishing, the need for changes in the current system, and the participants' roles in that system.

2. We are also trying actively to promote the transfer to cost-effective outlets and to more effective communication forms. In particular, we encourage not-for-profit enterprises and electronic journal publishing on the networks.
3. Another strategy is to create and propose useful, thoughtful discussions of the fundamental underlying issues, which are the areas of copyright, ownership, competition, peer review, and quality of publication.

I am going to list for you some of the things that we have been doing in support of these initiatives recently.

In the area of education, which includes reaching faculty and building a consensus, in the last year or so, (thanks to the efforts of our directors), I have been on at least twenty ARL campuses doing presentations, lectures, and symposia to faculty, administrators, and librarians on these issues. The ARL directors have been vital in that outreach. I have also given papers and presentations at about twenty professional and learned society meetings in that same time. The important thing to note is that research libraries really are making their presence felt. The number of invitations, especially from outside groups, is on the rise. It's fair to say we're now taking bookings a year in advance in some instances. There is a lot of demand.

I am very grateful to the ARL committees I have worked with, especially the new Scholarly Communications Committee, which is starting to provide some real assistance, guidance, and input. The Scholarly Communications Committee talked this morning about creating a position paper on matters such as copyright and ownership. The Committee also discussed the development of other documents that can be used on campuses.

In regard to supporting alternatives to the current scholarly publishing system, we have convened two or three meetings of people involved in creating new types of publications. With the collaboration of North Carolina State University, we brought together a dynamic group of electronic journal editors. That group continues to discuss ways to upgrade and promote this new publication medium.

We also convened a group of societies and government agencies who are working on major networked journal initiatives, and three of them are including the ARL in their planning meetings in this area. We are developing, with a couple of national associations, an outline for a two-day workshop that we hope to offer next year called, "The Electronic Journal: What is it and How Do I Publish One?" This is intended to be a hands on, non-theoretical workshop that would assist university presses, not-for-profit societies, and individual academics in starting new networked enterprises.

I was going to bring with me a copy of *The Directory of Electronic Journals, Newsletters and Academic Discussion Lists* that ARL published in July, but I couldn't do that. We printed 1,000 copies, and we are sold out. There are actually a few copies stashed away in a box in my office. My graduate student hid them from me because we have ten left and we have orders for about a hundred, so I'm not allowed to touch them. We faced a big decision in ARL about whether and in what format to reprint the *Directory*, and we decided to put our energies into two directions. One direction is to create a new edition early next year. About 40 percent of the entries have changes. Electronic academic communication and publishing are really moving. Things are changing very, very quickly, so we hope to publish a second edition about six months after the first one. About two in three directory purchasers is is not an ARL member. They include colleges, universities, discussion libraries, individuals, banks, and government agencies. The *Directory* tangibly raised, for the entire library community, the fact that there is a great deal of material on networks. What is the library community going to do about it?

We were asked by major granting agencies to submit a proposal that would take this directory and turn it into an online, user-friendly database. We are proposing to transform a series of ASCII flat files into one fully integrated, intelligent, searchable, interactive, continuously updated electronic directory file, mounted in appropriate places on the Net. Eventually we will probably put our paper product out of business, but that's okay,

A couple of minutes on national alliances and collaborations—we have been fortunate to work with many of the learned societies, but there are two that ARL has been working with that are particularly critical right now. One of them is the National Academy of Sciences, a very important group. Through the process of working very hard with two major societies this spring to bring back a major journal from the commercial to non-commercial sector, we attracted the attention of Dr. Frank Press, President of the National Academy of Sciences, and he became most interested in issues of monopoly, commercialization, and high prices. He has proposed to his Policy Planning Committee that the National Academy of Sciences should examine these questions. I have had two meetings with them. There will be a meeting of the full

Policy Committee on October 29th, and I think at this point, some decisions will be made about where NAS will go.

Another vital link for us has been the National Association of State Universities and Land-Grant Colleges (NASULGC). It is one of the most active associations in the higher education group, and NASULGC has been working closely with ARL in drafting resolutions of support for our OSAP activities. On November 10, I will be giving a two-hour presentation to NASULGC provosts. They want to hear about library serials prices, and suggestions from us about what universities might do in this arena. Also, two days later, NASULGC has convened the beginning of a small commission that will begin to address serials issues.

I would like to discuss two specific projects. The first project is the Elsevier/Springer/Pergamon (ESP) database. We are calling it "the Joe Rosenthal project" because he asked us about a year ago if we could produce a database of editors working for the major scientific, technical, and medical publishers. Christine Klein, our graduate student, has been very busy with that. We have had a lot of help from the entire ARL group with photocopying title pages and searching addresses through the *National Faculty Directory*. If I started to give credits on all the help we had on different points, we would never leave the room. We have now almost completed the ESP database. The number of editors on that list is close to 7,000.

I also wanted to report on the SPEC cancellation survey that we sent out and the results we have had from that. For two years in a row, we have asked you what your serial cancellation intentions are for next year. For the last three years, as reported in the *ARL Statistics*, serial subscriptions in university libraries have been falling by 1 percent per year. In September 1990, we learned that 53 percent of our members were planning $3 million worth of cancellations in 1991.

In the surveys that I calculated yesterday, 61 percent of our members are recording a planned almost $7 million worth of serials cancellation for the 1992 year. This suggests the willingness of not only libraries, but also of the entire community, to consider alternatives. These are dramatic events. We see at least a five-year downward drop in serials subscriptions on our campuses.

MR. WEBSTER: I think you can see Ann has been very active both on your campuses and with other national associations and higher education groups that share interests and concerns with this set of issues. She did not mention, but you probably noticed, that she has also been publishing several important articles that further inform our several constituencies of these issues. We are a little tight on time. I would invite one or two questions.

MR. BILLINGS: Are we somehow going to personally get this information through ARL staff ?

MS. OKERSON: This information will be available in the next issue of the newsletter.

MS. BRYNTESON: I'm wondering if you might have any insider observations or inside information about the law suit between Dialog and the American Chemical Society.

MS. OKERSON: I don't know if Paul or anybody here has more information on that. Anything I know about it is inconclusive. It was one of those situations where I couldn't tell who the good guys and bad guys were.

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Coalition for Networked Information
Paul Evan Peters, Director

MR. PETERS: Thank you, Duane. I would like to start this presentation by briefly recapitulating the basic analysis that led to the formation of the Coalition as a joint activity of ARL, CAUSE, and EDUCOM. We take pride, the three of us who work on the Coalition, in being managers of the program that is grounded in tradition.

The basic analysis, which was initially formulated in October 1989, is that the general underlying technological features of advanced packet switching networks like the Global Internet were all going in an extremely positive direction. And in October 1989 we were predicting that that would be accelerated even more by the imminent passage of the last session's version of NREN. Although things have changed in complexion, in degree this continues to be a fairly sound analysis.

In the intervening period, the performance characteristics, the scope of connectivity, and the complexity and cost characteristics of these networks have continued a trend in which they enable, indeed encourage, the creation of a wide variety of new information resources, services, and tools on these networks. These were resources, services, and tools that were literally not even imagined by the creators of this network as was the case, of course, with television and other major media from human history. I would like to substantiate these points somewhat, but again relatively briefly.

Figure 1 (see page15) shows what you have heard expressed in other forums (certainly in writings that have come out from the Coalition over the

past 20 months), which is that the amount of traffic being carried by the U.S. leg in Global Internet, alternatively known as the National Science Foundation network or the Interim Interagency NREN, has increased 20 percent per month minimum for every since the the statistics have been counted. In July 1991, the last time thisgraph was updated, there were 8.74 billion packets of information carried in the National Science Foundation network backbone. This represents approximately 100 billion characters of traffic throughout the Internet as a whole.

We are currently operating this National Science Foundation network in an operating speed of 45 million bits per second—two years ahead of what the original plan projected. It is now a sure bet that by 1995, if not by the end of 1993, we will be operating this network at a 1 billion-bit-per-second performance and 50,000 bits per page, which is not bad considering what it takes to scan materials using equipment like Xerox technology. One billion bits per second means you can transport 20,000 pages per second.

The connectivity of these networks shows spectacular growth (see figure 2, page 16). In the last two years alone, the total number of networks that can be reached by people in the United States who have access to the National Science Foundation network has grown 512 percent, from 603 networks worldwide in July of 1989 to 3,086 networks now.

Even more important is that the percentage of that networking scope which is accounted for by networks out of the United States has grown by over 1,000 percent, from just under 100 foreign networks in July 1989 to just over 1,000 foreign networks now; the ratio of total foreign connectivity to total connectivity provided by the Global Internet has gone from six-to-one to three-to-one.

Indeed the growth area now is a low connectivity. Larry Landweber, a computer scientist at the University of Wisconsin, is devoting a lot of interest to keeping up with foreign connectivity. His most recent figures were published in September, and he now counts 91 countries around the world that can be reached through this Global Internet. This is an important fact because in October, 166 countries participated at the opening of the UN General Assembly, so this network now spans well over half the countries on the globe.

I submit that complexity and cost, while tending in the right direction, are still our most complicated and most slowly improving parts of the curve. They are moving in the right direction. We are working with a more common infrastructure. We are providing easier access to that infrastructure, and in a variety of ways, we are seeing more affordable access to that infrastructure. But this is the pressure point now—reducing the complexity, controlling the cost of the network. It's going in the right direction, but it is not going as fast as we need it to go.

Since these three things are going in the right direction, they are starting to enable a new information access delivery environment in which we are beginning to see the sorts of things that Ann just spoke of—the appearance of electronic mail conferences, journals, and databases like our catalogs. Digital libraries that preserve materials and other page-oriented digitally scanned information are beginning to appear in these networks. High volume print facilities that are images "just in time" rather than "just in case" are going to become very common, and we are all intrigued by the application of artificial intelligence techniques as articulated by the Corporation for National Research Initiatives pertaining to intelligent filters, intelligent robots (knowbots), and intelligent databases.

The other thing that has become very clear to me over the past 20 months is that through the 1970s and 1980s, there were two entirely different networking communities working on two entirely different visions in the United States and other countries around the world. The first was the computer networking community. This community was working on a vision of networks as vehicles to provide access to supercomputers and other rare and expensive scientific instruments. We owe to this community's hard work things like the NSF network, Global Internet, and variety of other networks. However, throughout the exact same period, through some sort of historical synchronicity, there was an entirely different community which in general was populated by librarians pursuing networking as a vehicle to provide access to information such as cataloging data and other information that libraries collectively provide access to. It was this community that built OCLC. It was this community that built the Research Libraries Information Network, Colorado Alliance of Research Libraries, and MELVIL, and other statewide and national networks. I believe that when the National Research and Education Networking initiative came forward, both communities saw this as a solution to their future. They came to form a new community known as the network information community, and the Coalition is trying to provide a vehicle for their aspirations.

To give you a sense of where we stand now, we see our program developing through three distinct phases anticipated by an analysis of a psychology of technology brought forward many years ago by John Diebold. In particular, we now

believe that the network media will be used first to modernize document delivery. It will be used second to innovate access to information, and finally it will be used, (we hope before the end of the decade) to transform the way knowledge is created.

I have another way of putting this. I call it the "evolutionary metaphor." We are coming out of what needs to be called the paleoelectronic period. To remind you of archaeology, the paleolithic period was characterized by crude tools. That says something about the world I have been living in the past 20 years. We have just recently arrived, at least some of us have, in the mesoelectronic period. Again harkening back to what defined characteristics of the mesolithic period: the start of agriculture and the domestication of plants and animals. I thought hard about this. I think the agriculture we are trying to domesticate is our databases. After all, they stay in one place and grow somewhat like a tree, and the animals that we are trying to domesticate are algorithms which do our bidding, particularly viruses, which can move throughout the network. I look forward to the neoelectronic period, which again using the analogy of the neolithic period, is the period which will be characterized by fine tools and development of early industry, particularly the specialized social division of labor. Some of you may think that the division of labor and the network information is specialized now. I submit to you as long as we refer to the people we depend upon every day as human wizards, we do not have specialized division of labor.

On the electronic frontier, from my perspective, after the first twenty months of the Coalition, explorers, pioneers, and outlaws are fast giving way to settlers, politicians, and circuit riders like myself.

We took a look at the end of our first year. We see no need to change our mission statement. We still draw our inspiration from a mission by which we seek "to promote the creation of and access to information resources in networked environments in order to enrich scholarship and enhance intellectual productivity." Enriching scholarship and enhancing intellectual productivity is a mission we take very seriously.

Our objectives continue to be: to formulate a program that inspires our constituency by promulgating a singular vision of the present and how the present may change into the future; to inform our constituency by identifying, endorsing, supporting, and coordinating projects and showing the way to the future; to influence the environment in which our constituency finds itself by advocating principles, guidelines, and positions that are in the interest of our constituency; and to integrate the efforts of our constituency by providing opportunities for senior administrators of libraries and senior administrators of technology to work on a common program of work.

We were founded in March 1990 during the National Net '90 meeting. The Coalition is constituted by the membership of ARL, CAUSE, and EDUCOM. The Coalition is governed by a nine person steering committee, three member leaders from ARL, CAUSE and EDUCOM each being named to that steering committee. Just under 150 members of ARL, CAUSE, and EDUCOM and other interested institutions and organizations have joined the Task Force that we use as a vehicle to advance the mission of the Coalition. We formed eight working groups (see figure 3, page 17). We currently are staffed by a three person secretariat, and we look forward to introducing a variety of network services for which we have gained support from our steering committee.

There are some recent changes that I would like to call to your attention. When we started the Coalition, we named the first two working groups the Working Group on Non-commercial Publishing and the Working Group on Commercial Publishing. Given our analysis on modernization giving way to innovation giving way to transformation, at the end of our first year we renamed the commercial publishing working group as the Working Group on the Modernization of Scholarly Publication, and we renamed the non-commercial publishing working group as the Working Group on the Transformation of Scholarly Communication.

In addition, you will note that we now have eight rather than seven working groups because at the end of our first fiscal year, we decided that we needed to form a Working Group on Access to Public Information.

The Coalition's projects and work groups are focusing on "readiness factors" to enable our constituents to operate in the networked environment; I don't have time today to do more than list these (see figures 4 and 5, pages 18 - 19).

I would like to close with two definitions that have taken on particular resonance at the end of the Coalition's first twenty months.

First we now offer a definition of networked information: it is the type of electromagnetic information that is accessed and delivered and perhaps even created and stored through use of the network medium. We offer as well that it is the type of electromagnetic information for which the artifacts of transport and storage are the most intactile and elusive, and since in the current print media there are a lot of business and property issues that adhere to the artifact of transmission and storage, the fact that this artifact appears in the network information media presents an absolutely fascinating intel-

lectual and business problem.

Finally, I would like to close with a definition I offer for what constitutes a coalition. I originally formulated this definition after a brief trip to England where I sat with a number of people from the JANET Libraries User Group, and someone asked an intriguing question—we are familiar with the English word coalition, but we are not sure how you Americans use it. Suddenly I realized that in the United States of America, we have lots of words for coalition—confederation, consortium, etc. In England, they have none, so what I now offer is something that speaks to the heart of the creativity of the coalition. A coalition is an undertaking of two or more parties seeking to advance a shared interest while maintaining their separate identities in the awareness that they have other interests. These interests are different and may even be in conflict.

MR. WEBSTER: Thank you, Paul. As you can see, under Paul's leadership, the Coalition is achieving its potential by focused collaboration among three organizations that have a large stake in the future of networked information services on campus.

Paul did mention the nine person steering committee that serves to provide policy guidance for the Coalition. I would like to note the three ARL directors that represent your interests on that group. They are Jerome Yavarkovsky, Susan Brynteson, and Nancy Cline. While I'm confident that you are quite capable of talking to Paul and me, we also urge you to share your views, judgments, and advice with those three people, the policy-making group for the Coalition.

I hope the reviews this afternoon captured the duality of so much of what we are involved with at ARL. On the one hand, we are very much concerned with helping you improve the performance and direct the transformation of research libraries into a new environment. While we are very much concerned with providing that support and set of services that are most useful for you in moving in those new directions, we are also very concerned about the issues that serve to shape this future environment. We are very determined to help find that future environment that is in fact hospitable to the interest of scholarship and the interest of research and education that we serve.

I hope you are as pleased as I am with the performance and the capability of the staff that you have working for you. I can assure you there are an additional core of staff that are working on other programs in support of your interest.

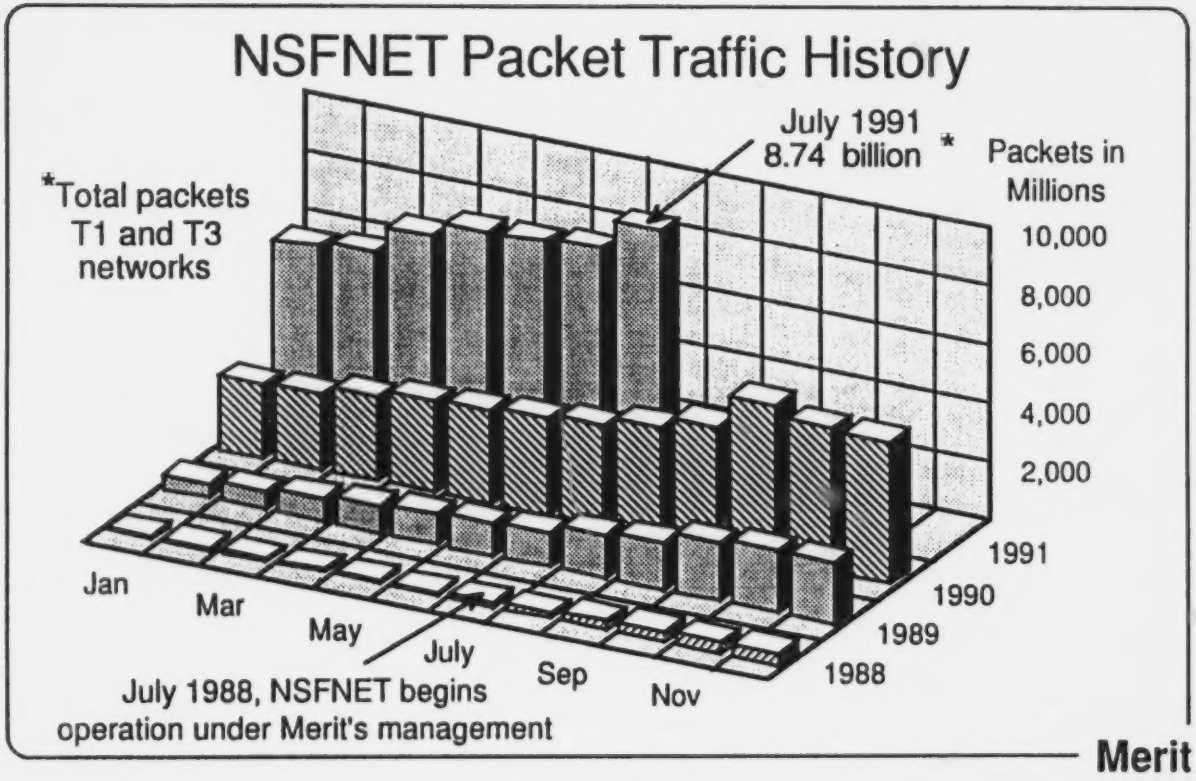
NSFNET Packet Traffic History
July 1991
8.74 billion *
Packets in
Millions
*Total packets
T1 and T3
networks
10,000
8,000
6,000
4,000
2,000
1991
1990
1989
1988
Jan
Mar
May
July
Sep
Nov
July 1988, NSFNET begins
operation under Merit's management
Merit

Figure 1

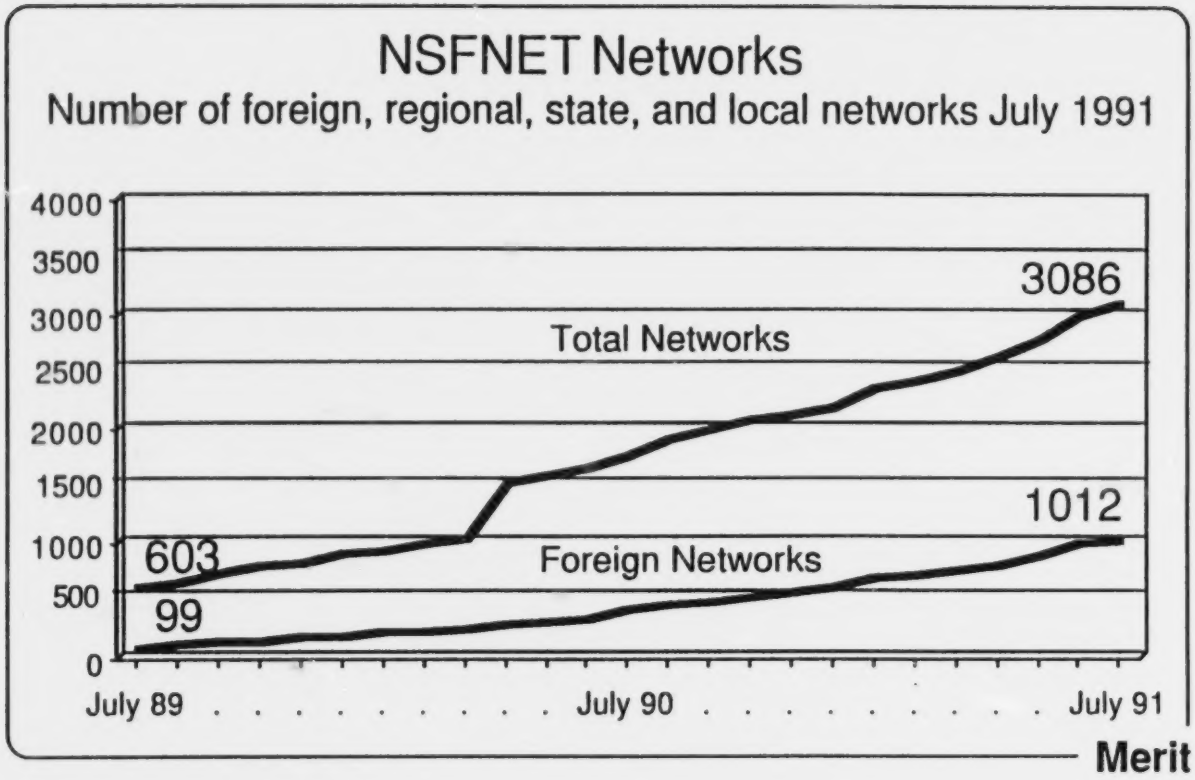
NSFNET Networks
Number of foreign, regional, state, and local networks July 1991
4000
3500
3000
2500
2000
1500
1000
500
0
3086
Total Networks
1012
603
Foreign Networks
99
July 89
July 90
July 91
Merit

Figure 2

Coalition for Networked Information

WORKING GROUPS

Modernization of Scholarly Publishing

Transformation of Scholarly Communication

Directories and Resource Information Services

Architectures and Standards

Legislation, Codes, Policies, and Practices

Access to Government Information

Teaching and Learning

Management and Professional and User Education

To Advance Scholarship and Intellectual Productivity

Figure 3

Coalition for Networked Information

MARKETPLACE READINESS FACTORS

Technological Infrastructure

Regulatory and Policy Framework

Value, Cost, and Price Uncertainties

Copyright and Security Provisions

Market Mechanisms and Structures

The Boundaries of Business

To Advance Scholarship and Intellectual Productivity

Figure 4

Coalition for Networked Information

INSTITUTIONAL AND ORGANIZATIONAL READINESS FACTORS

The Last Mile

Skills and Support Services

Cultural Environment(s)

Vision into Action

To Advance Scholarship and Intellectual Productivity

Figure 5

GENERAL PROGRAM SESSION II

STRATEGIC ISSUES FORUMS

MANAGEMENT OF RESEARCH LIBRARY RESOURCES

"MANAGEMENT ISSUES THAT KEEP DIRECTORS AWAKE AT NIGHT"

Joanne Euster
Rutgers University

MS. EUSTER: Welcome to the program session on management of research library resources, being held under the aegis of the ARL committee of the same name. The session is designed as a strategy forum to provide membership advice for the direction of the Management Committee and the Advisory Committee on Statistics. An OMS advisory committee has recently been established to free up the Committee on the Management of Research Library Resources to deal with management concerns of ARL directors and their libraries, rather than to spend its time on OMS operations. In a sense, we are now starting a new agenda for the Management Committee.

This session is in two parts. The first half will be devoted to management issues of concern to ARL directors, in particular those issues that we have described as the issues that keep you awake at night. The second part of the session will be devoted to the work of the Statistics Committee vis-a-vis the purpose and usefulness of various models for ARL data collection and display. Each part involves a short presentation followed by small group discussions to give some advice to the two committees.

The Management Committee is charged, and I'm quoting, "to monitor developments, determine critical issues requiring ARL attention, and inform members and design strategic responses that can serve to strengthen the management of research library resources." The expanded charge goes on for a page and a half of detail, and we find ourselves faced with more potential than we can possibly deal with. As a committee we are here to seek your advice and to get your help in choosing wisely among the many issues that are our potential agenda so we can focus on a manageable number of specific action items.

At the Montreal meeting last May we began a sort of reality check: What issues are important enough to lie awake worrying about? This led to the Survey of Management Issues That Keep ARL Directors Awake at Night, the Quick SPEC survey conducted at the end of September.

What follows is a brief report on the survey results so that you will have enough information to proceed in the small group discussions. I want to thank all of you and your colleagues who responded so promptly to the survey. The preliminary data, as of October 11, had about a 70 percent response rate, and since then a number of additional surveys have come in, so the response rate was incredibly high, particularly considering the very short turnaround time. Thanks also to the OMS staff who worked heroically to get the survey done, to get the data tabulated, and charts prepared. They did a great job.

The survey covered seven areas of management concerns. Directors were asked to identify their top three issues in each category as well as rank the general categories from highest to lowest priority.

Figure 1 (see page 25) shows the listing of general categories with weighted rankings from highest to lowest concern. As you can see, Financial Resources was the overall top concern, followed very closely by Library Performance, with Human Resources Development and Management of Technology tied for third. Then The Role of the Research Library in the 21st Century and Organizational Development were virtually tied for fourth. Library Education was last. You will also note, however, that the spread among the categories is not very great, although there is a fairly decent spread between the highest and the lowest concerns, but it stair-steps down gradually.

Within the categories of concern, you were asked to choose your top three concerns in each grouping (see figure 2, page 26), the first being Financial Resources. The top concern under financial resources was "what can we do to make resource sharing endeavors more positive?" The second concern was "dealing with the lack of money to address immediate problems, much less make improvements and take advantage of new opportunities," and finally the third concern was "obtaining more private support for library projects."

Under Library Performance (see figure 3, p. 27), the second category of concern, the top issue by quite a bit was, "what is the best way to demonstrate the library's effectiveness? " Second was, "what kind of data or information about libraries do university administrators really understand and use? What data do they need? " And finally was the question, "how do I measure the library's performance?" These issues tie very closely to the work of the Statistics Committee as well as to the Management Committee's work.

Category 3 was Human Resources Development" (see figure 4, page 28). The top concern in the preliminary results was "how to enhance the

ability of staff and administrators to deal with the constant change that research libraries are continuing to experience," and second was, "how to develop leadership qualities in staff." The third-ranked concern was "providing an environment that rewards staff accomplishments and adequately compensates them."

The Management of Technology was an interesting area in the sense that there was a virtual tie among the top three concerns: "how to adequately evaluate recommendations and make sound decisions in the area of technology," "how the library can participate in technological developments across the campus and be an integral part of institutional planning," and "how to balance the costs of keeping up versus the costs of falling behind" (see figure 5, page 29). I have been told very optimistically by our administration that we are so far behind, we are ahead!

Regarding the Role of The Research Library in The 21st Century (see figure 6, page 30), the first concern, with 59 responses, was "how the libraries and librarians can become collaborators with other information providers." The second highest area of concern was, "how the library will connect faculty and students and other users with information resources throughout the world," and the third most popular area of concern was "how will we continue to provide collections to support scholarly endeavors.

Under Organizational Development Concerns (see figure 7, page 31), the first area of concern was "what kinds of organizational structures will permit us to deal effectively with the interrelatedness of library operation in a technological environment, enabling staff to deal with potential multiple reporting lines". Second, again a virtual tie, was "how to implement change effectively without trauma to library users, librarians, and staff," and "what means are available to facilitate and award creativity, innovation, and entrepreneurship?".

In the Library Education Concerns category (see figure 8, page 32), "how can we attract the best and the brightest to library school?" was clearly the top choice; and then very close were the three remaining categories: "how can we ensure that library schools prepare people for academic and research libraries, knowledge of library operations and understanding of higher education and scholarship?"; "attracting a more diverse, pluralistic population to library school"; and "influencing library school curricula so that it includes pressing concerns such as preservation, research, and development in library systems. "

That is the survey—the data from the front lines. Now we would like to give you time to give us further feedback. You told us what is important to you; in the small groups you can give us further advice to help focus the Committee's action agenda as well. Members of the Management Committee have strategically placed themselves around the room and will serve as discussion leaders. We have prepared a list of questions for you to use in your discussion. First, looking at the top survey priority in each category, do any of them suggest an activity or project the Management Committee could undertake? Second, the survey offered a relatively closed list of choices. If you could add one or two issues, what would they be? And third, as you look at the list, is there further advice that you would like to give the Management Committee about engaging the set of issues? This is your opportunity to give us some advice and shape our agenda for next year, or perhaps for two to three years.

[Editor's note: Small group discussions were not formally documented.]

MS. EUSTER: We have to go on to the next part of our discussion. We never seem to quite finish discussing management issues, which are probably symptomatic of the nature of management issues which we are all deeply involved in. Certainly management information is integral to management decision-making, library performance, and how we measure and demonstrate effectiveness, which were highly rated on the concerns in the survey.

We will now shift to the Statistics Committee's concerns, which are also part of the Association's strategic objective on management. Irene Hoadley is going to give some background, options, and alternatives for how ARL handles statistics issues.

SECTION 1—GENERAL ISSUES Top issues listed in priority order.

#1 FINANCIAL RESOURCES

#2 LIBRARY PERFORMANCE

#3 HUMAN RESOURCES DEVELOPMENT } TIE

#3 MANAGEMENT OF TECHNOLOGY

#4 ROLE OF THE RESEARCH LIBRARY IN THE 21ST CENTURY

#5 ORGANIZATIONAL DEVELOPMENT

#6 LIBRARY EDUCATION

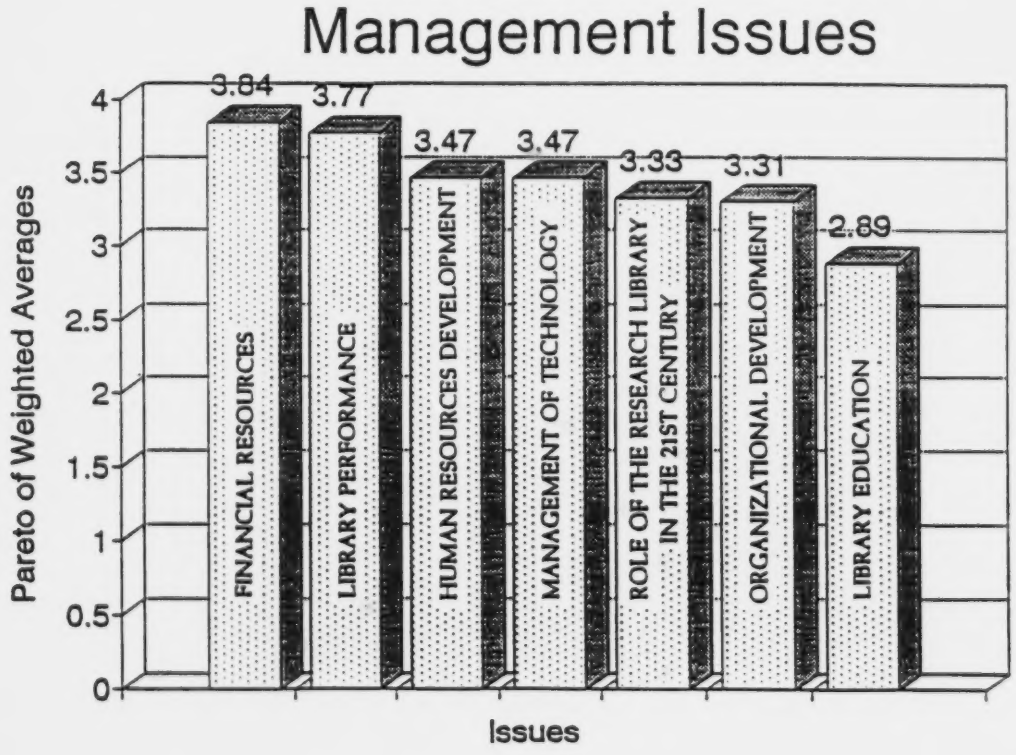

Figure 1

SECTION 2—CONCERNS Top 3 concerns in each grouping, based on total responses for each question in each category.

FINANCIAL RESOURCES

A How do I deal with the lack of money to address immediate problems, much less make improvements and pursue new opportunities?

B Will increasing reliance on external funding shape our priorities in ways that are not appropriate?

C How will we find the money to accommodate escalating serials' prices?

D What can we do to make cooperative/resource-sharing endeavors more cost effective?

E How do I obtain more private support for library projects?

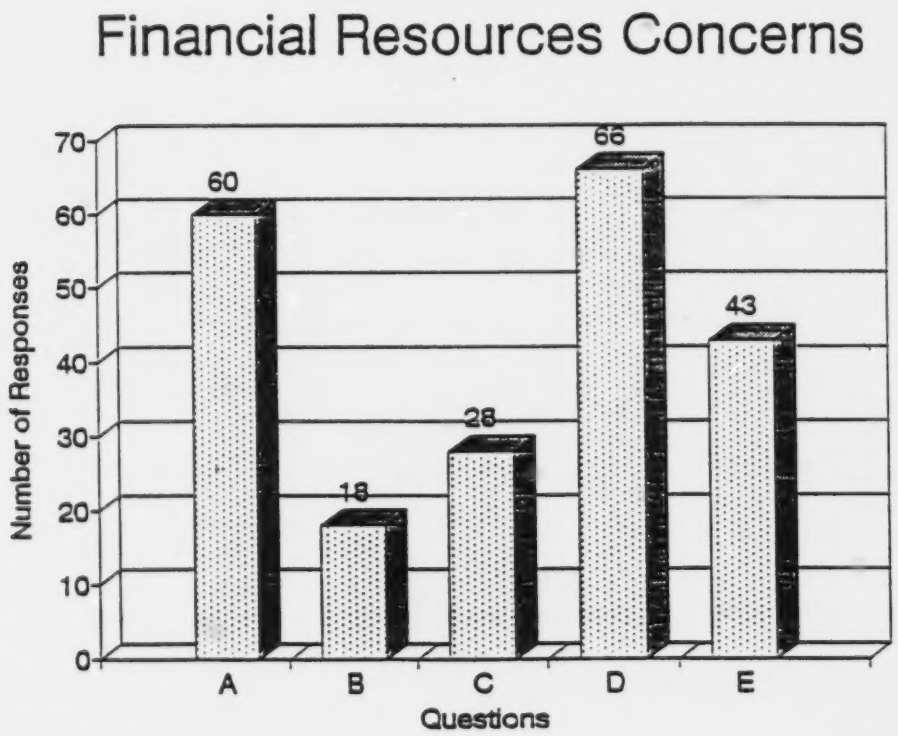

Figure 2

LIBRARY PERFORMANCE

A How do I measure the library's performance?

B What kind of data or information about libraries do university administrators really understand and use? What data do they need?

C What is the best way to demonstrate the library's effectiveness?

D What do we really mean when we talk about "performance" or "access" as ways to demonstrate library effectiveness? Is measuring performance or access a local or national concern?

E How can we evaluate/measure services and resources in a networked environment?

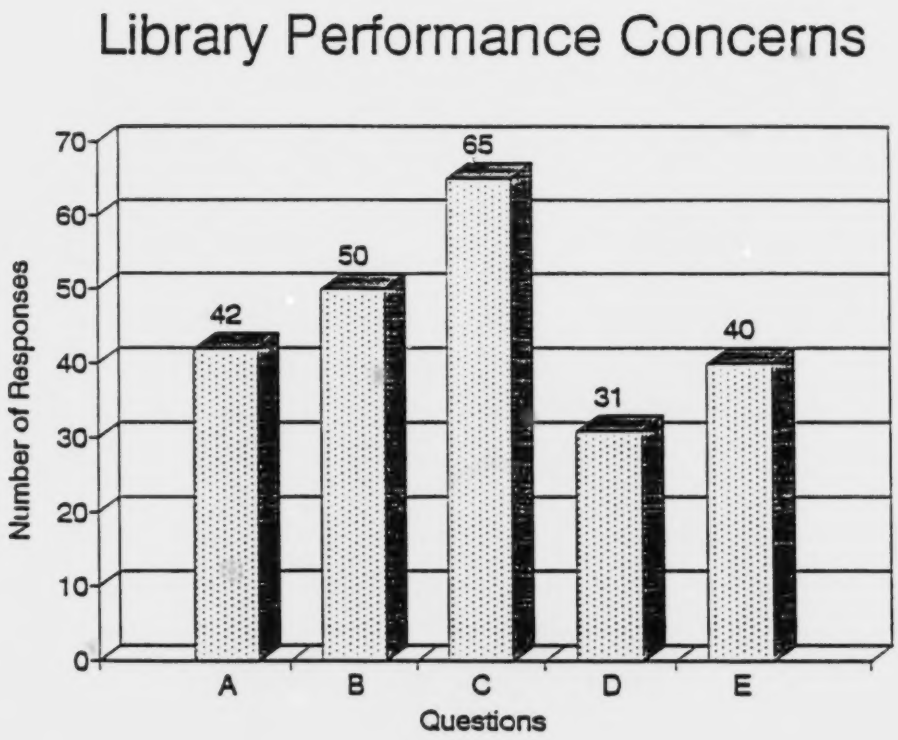

Figure 3

HUMAN RESOURCES DEVELOPMENT

A How can I enhance the ability of the staff (and administrators) to deal with the constant and rapid change that research libraries are likely to continue experiencing?

B How will I find the resources to provide the extensive training/retraining and continuing education that are increasingly essential in our rapidly changing environment?

C How do we balance organizational expectations of library faculty between line responsibilities and professional and research activities?

D How can we develop leadership qualities in our staff?

E How do I provide an environment that rewards staff accomplishments and adequately compensates them?

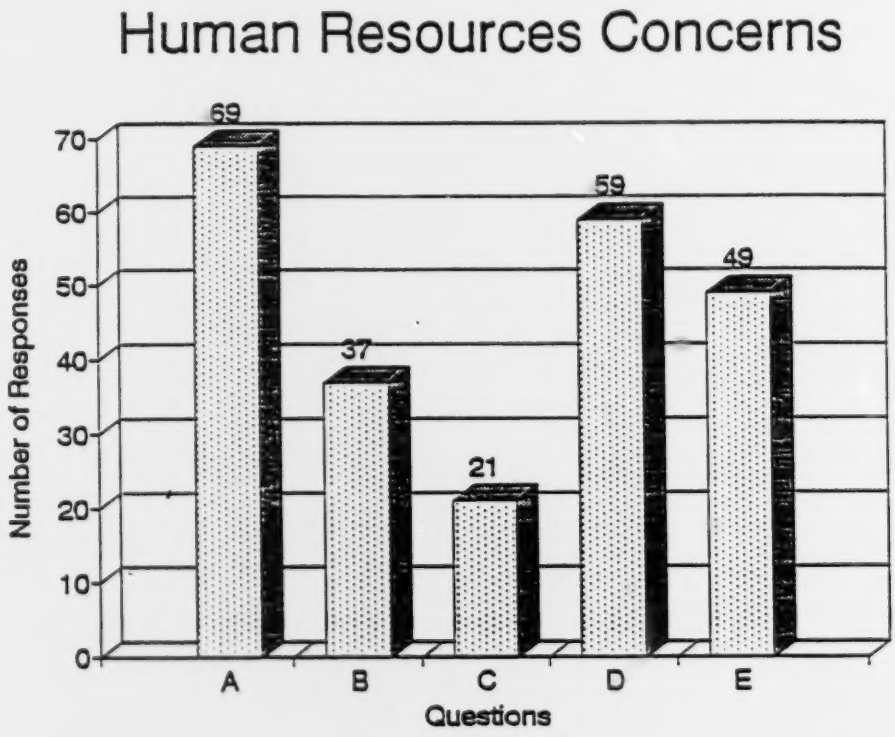

Figure 4

MANAGEMENT OF TECHNOLOGY

A How does the library adequately evaluate recommendations and make sound decisions in the area of technology?

B How do I balance the costs of keeping up and the costs of falling behind?

C How do we implement "to be established" standards?

D How can I participate in technological development across campus, so that the library is an integral part of institutional planning?

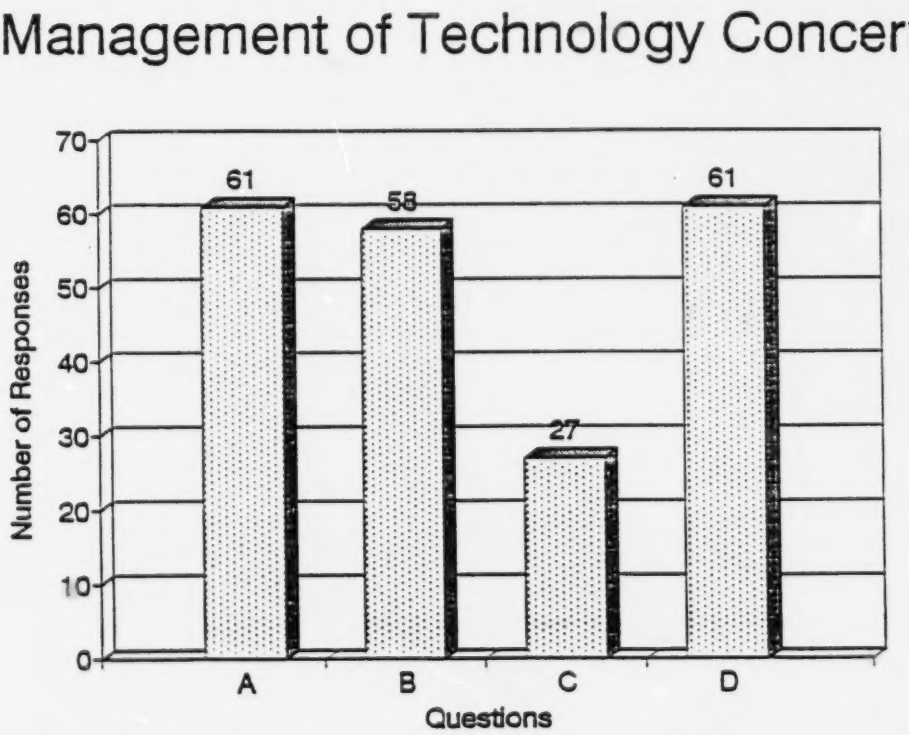

Figure 5

ROLE OF THE RESEARCH LIBRARY IN THE 21ST CENTURY

A How will the library connect students/faculty and other users with information resources throughout the world?

B Where will we find staff who can serve as competent partners with faculty in research and teaching?

C How will we continue to provide collections to support scholarly endeavors?

D How can we become collaborators with other information providers?

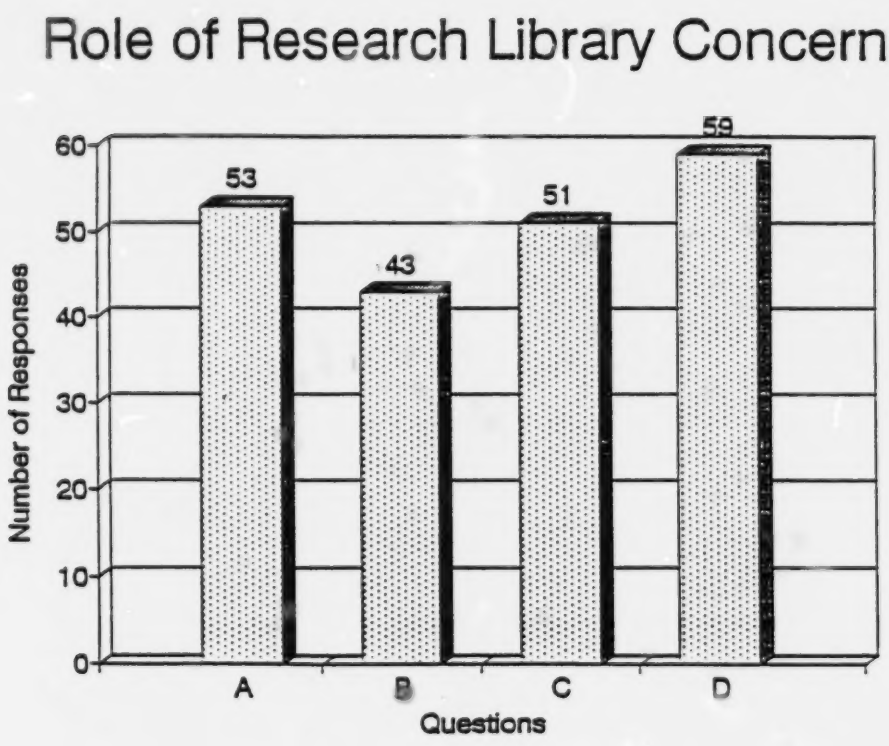

Figure 6

ORGANIZATIONAL DEVELOPMENT

A How do you balance individual empowerment and accountability among staff and organizational units?

B What kind of organizational structures will permit us to deal effectively with the interrelatedness of library operations in a technological environment and enable staff to deal with potential multiple reporting lines?

C How do you accommodate the diversity of needs and styles in structuring individual positions while still meeting organizational needs?

D What means are available to facilitate and reward creativity, innovation, and entrepreneurship?

E How do we implement change effectively without trauma to Library users, librarians, and staff?

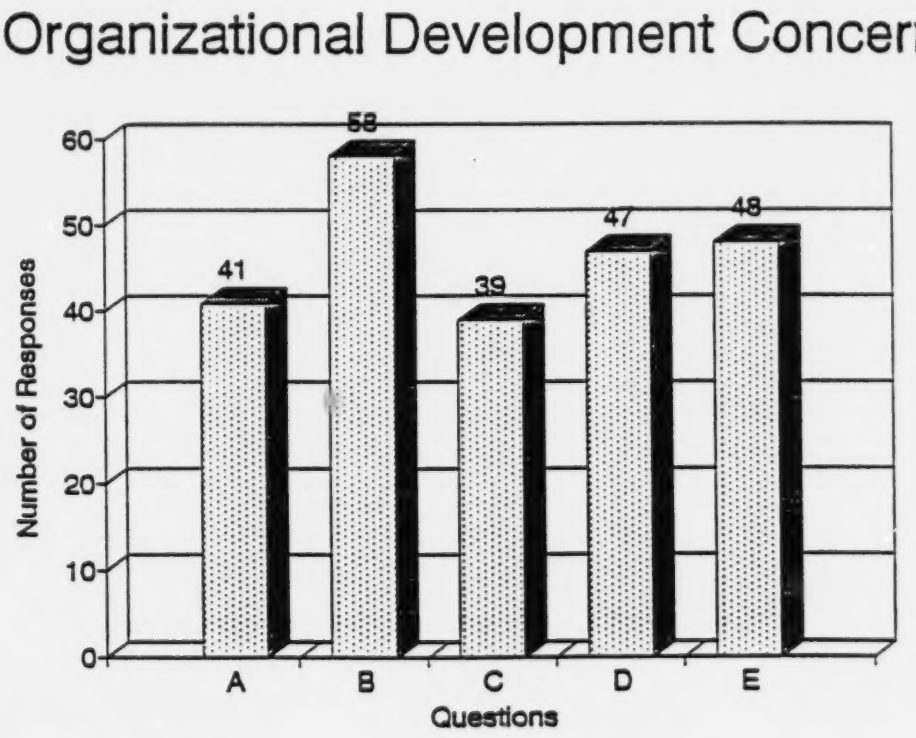

Figure 7

LIBRARY EDUCATION

A How can we attract the "best and brightest" to library school?

B How can we insure that library schools prepare people for academic and research libraries with both practical knowledge of library operations and an understanding of higher education and scholarship?

C How can we attract a more diverse/pluralistic population to library school?

D How can we influence library school curricula so that it includes pressing concerns such as preservation, research, and development in library systems?

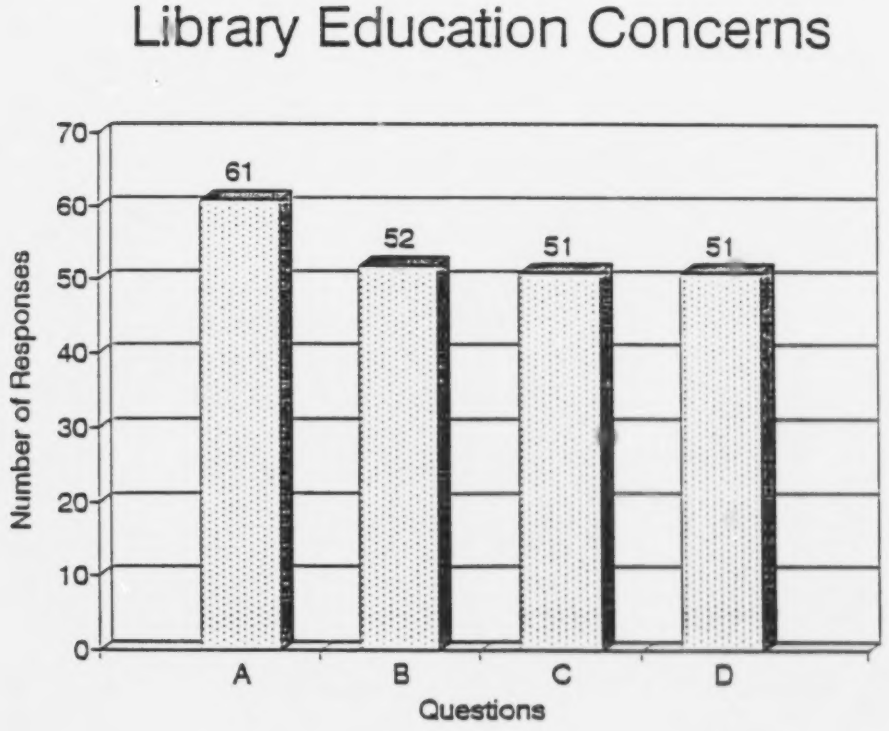

Figure 8

"ARL STATISTICS: NIGHTMARES OR PLEASANT DREAMS?"

Irene Hoadley
Texas A&M University

MS. HOADLEY: Twenty plus years ago there was an anonymously published article entitled, "Significance of Precision Credibility," which conveyed the author's "skeptical attitude toward quantitative methods and use of statistics as exact measures." The author goes on to say: "In any calculations involving multiplication, extraction of square roots, et cetra, the results can be no more precise than the coarest quantity in the calculators."[1] The author sums up by suggesting that several considerations be kept in mind when compiling statistics, and they include: do not deceive others by presenting figures which are not precise to the degree in which you express them; and do not delude yourself.[2] Another wise librarian said, "Compilation and publication of simple and uncritical rank orders, notions of mediums, et cetra, provide little beyond increased opportunity for oversimplification and error."[3]

So with that as background, if this view of statistics has any credibility, then some of us lie awake at night either because of our nightmares about where we are in these rankings, or because of our very sweet dreams when we have ranked near the top. Most of us are probably not losing an awful lot of sleep over this particular issue.

Part of the survey dealt with the issue of library effectiveness. We all have our own subjective measures that are sure to make "our" library look good in the eyes of the beholder. The Statistics Committee is trying to address a more logical, analytical approach to the issue. Unfortunately, there are no easy answers, but there are several choices, and we want to suggest some of these choices so that you can help the Statistics Committee determine what will be in the best interest of all libraries. ARL has provided a mechanism for collecting data over a long span of years. These statistics have been used to compare our libraries to each other and to provide a longitudinal view of library development. It is important, however, to keep in mind that statistics are a means, not an end. Better data is not the only goal. The goal is better library management and better library service. It should also be noted that other organizations have come to value our statistics also. For example, the National Academy of Sciences has recently involved ARL in its decennial update of the evaluation of graduate programs. This is only one example of many that are taking place.

ARL has attempted in its data collection to provide two types of data: information that assists in making better internal management decisions, such as the allocation of resources; and data that will communicate the impact of these decisions to an external audience by showing the results of our efforts. Internal data needs to be pertinent to each individual situation, while the data used for external purposes must be comparable to other libraries and educational institutions to allow comparison of progress, to share resources, and to assess the aggregate contribution libraries are making.

One question posed in the survey is related to what university administrators use and understand. Are we going to a lot of trouble collecting statistics on every aspect of our operation when university officials don't know the difference? And, in turn, are they asking for data we do not have and we do not know how to get. For example, a figure that many presidents like to use (and the media picks up on) is the figure for library expenditures as a percentage of total university educational and general expenditures. And yet, most of us know that figure is full of incredible inconsistencies and exceptions and requires extensive footnotes and caveats to have any validity, and even then, only for a carefully selected peer group. The Statistics Committee commissioned a small study on this issue which indicated that even with its imperfections, ARL should probably continue collecting the data, even though there were some strong negative concerns. Efforts have been made to find ways of making the data more valid, but that seems to be beyond the realm of possibility, and remember my beginning quotes. There are differing definitions for budget categories as determined by the university, and it involves some sensitive politics about what people at every level of the institution do and do not want to include. It is the kind of statistic that can be used out of context and have a negative impact on the library. However, in some cases, in a very different kind of situation, it can have a very positive benefit for an institution.

And then there is the *ARL Index*. It was not originally intended to rank libraries or to address quality. There have probably been more debates on this issue than I can remember, and probably some of the most heated I remember in this organization. Should we publish it or not? Are five variables more relevant than ten, and on and on. *The Index* is one of those measures that can be leveraged for positive and negative effects and has impact be-

yond the walls of the library. But what happens if *The Index* goes away? How is membership potential assessed? Will some other measures such as total volumes or numbers of reference questions take its place?

That leads to the next question, which centers on performance access and output measures. Should ARL also consider "assessment" and "output" measures, which are the new rage in educational circles? Can libraries find ways to be part of the assessment model? Can a goal-centered evaluation still provide cross-institutional comparison? Do we want to report our scores on various performance measures on a national level? Is a different kind of measure needed, one that reflects our investment in access to information?

Many of you will recall that these are issues that ARL has struggled with for a long time. There was the Paul Kantor book on output measures, and last year Beth Shapiro addressed access measures as part of the Mellon grant. The result of Beth's work can be seen in the questions on public service and electronic access, which are not a part of the supplementary statistics questionnaire. A second result will be a multi-year inventory of library access characteristics. That will be mailed to you later this year. And I know you're going to be sitting there waiting for this to arrive so that you and all the staff can jump right on it and get it done. So much for the advertising. The inventory will deal with facilities, equipment, and special services. These types of questions raise many of the same old issues, but with a slightly different twist. How reliable and consistent will they be? Will we want to compare them nationally, or should they be added to *The Index*? What should be the focus of *The Index*? Has *The Index* become somewhat dotty in its makeup? Is it finally time to reconstitute *The Index* and use measures that are meaningful, definable, and collectable? Are the qualitative measures centering on performance and access more relevant today than the qualitative measures of how many of everything? Assuming that it is desirable to integrate access into our formula, how do we measure expenditures and services in automation and access to information? This is a question with relevance not only for the purpose of comparative statistics, but also on a local level to be able to justify budget allocations and to prove the fact of what is being done.

There has been considerable collaboration among ARL, ALA, and the National Center for Educational Statistics recently to try to improve the data for the IPEDS to ask a series of questions integrated into the sections on expenditures, collections, and services that address automation issues. For example, there may be a question on the number of online catalog transactions. That question is also on the ARL supplemental form, and coming up with a definition for transactions is almost impossible given that various systems and service configurations may track log-ons, search commands, key strokes, or something else. Can we distinguish between remote and on-site users, and/or do we really care? Does it matter how many ports we have if the catalog provides access to the Internet? Do we even know what a catalog is in today's environment? Do we need to count the number of electronic databases or CD ROM files available on each campus? What exactly is it that we want to measure and demonstrate when considering these resources and their use?

Another way of looking at this issue is to acknowledge that money is the foundation of all services and functions. Information products cost money. Staff costs money. Services cost money. Resource sharing costs money, and preservation costs money. It's easy to count money even if we could not define a unit of service or define what a catalog is. Actually that may not be true since almost one-third of us do not report figures for the number of monographs and serials purchased. If that is the case, what are the chances of getting expenditures breakdowns that include hardware, software, maintenance, resource sharing, and document delivery?

And then there is also the question of where the money is that pays for some of our services. Are we including monies that are in the computer center budget and reporting to ARL? I'm sure some of us do that.

Are we coming to a point where, in order to do an evaluation of the information and research services of an institution, ARL and perhaps CAUSE should jointly collect statistics because resources are spread across several campus units? Should ARL put aside its statistical program and rely on IPEDS data for comparative purposes?

The Statistics Committee has held some informal sessions on statistics at the last two meetings of the Coalition for Networked Information. Although there is a lot of interest, and much criticism of the old measures, there is no apparent perfect answer that has been overlooked. What the Statistics Committee needs is an indication of where to go from here.

Now as you debate this issue, which is what you are going to start to do in just a few minutes, there are some options that you will want to consider in your discussions: 1. Maintain the status quo. Continue the emphasis on total number; 2. Abandon *The Index*, collect statistics, and report them back to the members, and that would be it; 3. Recreate *The Index* with a balance of access and

quantitative measures; 4. Maintain two indexes—the one we have, and a second for access measures; 5. Get out of the statistics business. Do not collect statistics. Do not do an index; and 6. Move to provide expenditures per student and faculty members, nothing more than two very simple numbers.

What is important at this juncture is that a conscious decision be one that promotes the common good, and not one that protects or promotes a particular library or group of libraries. I for one want to think that my sleepless nights were caused by coming up with a solution to our problem, and not the fear of having done nothing about it.

[1] "Significance, Precision, and Credibility." In: Irene Hoadley and Alice S. Clark, editors. *Quantitative Methods in Librarianship: Standards, Research, Management*. Westpoint, CN: Greenwood Press, 1972. pp. 232-235.

[2] ibid., 235.

[3] Piternick, George, "ARL Statistics—Handle With Care" *College and Research Libraries*, 38:422 (September 1977).

PRESERVATION OF RESEARCH LIBRARY RESOURCES

"FUNDING PRESERVATION PROGRAMS IN ARL LIBRARIES: STRATEGIES FOR THE 1990s"

William J. Studer
Ohio State University

MR. STUDER: We have three presentations concerning preservation at the institutional level, and a presentation from Ken Harris on the status of mass preservation at the Library of Congress. The University of Kentucky just completed a preservation self study and Paul Willis is faced with the issue of what to do with all the recommendations in the face of a severe budget downturn. Paul is going to tell us what thoughts he has on how to begin to finance a preservation program in stringent economic times. We're going to hear then from Scott Bennett about increasing productivity in a time of shrinking resources—how to do more with less. We're going to hear from Joe Rosenthal, who is from a library with a longstanding major preservation program and a library that has sustained the better part of a million dollar budget reduction over the past two years. How does one cope, where does one make reductions and continue to persevere in the preservation arena? And then Ken Harris will update us on the mass deacidification at LC, and we can talk more generally about where that project is moving. Our committee is going to be centrally focused on that over the next year or two.

"FINANCING A NEW PRESERVATION PROGRAM"

Paul Willis
University of Kentucky

MR. WILLIS: I want to tell you about our efforts to develop and implement a preservation program, despite limited funds at the University of Kentucky.

We haven't done anything that I've been able to "patent" yet, and we probably haven't done anything that you haven't thought about, considered or perhaps implemented. But at least I can give you an overview of where we stand.

We started a Preservation Committee at the University of Kentucky in the late '70s; Jerry Munoff, now at the University of Chicago, chaired it the first year. About that time, we sent a staff member, Cheryl Jones, from the law library to a program at Yale. She was there for several months and developed some expertise and brought it back and shared it with our staff. The Preservation Committee raised staff awareness about preservation issues and began to educate the university community. Some of the things they did included simple exhibits for the public showing and emphasizing preservation issues. We did some window treatment in special collections and we put filters on the fluorescent bulbs and things of that sort. We developed a disaster plan and created a stockpile of disaster supplies, and over the time that this Committee has existed, our major disaster has been water. The work of that Committee, having a stockpile of supplies, seeing that used time and again, caused the staff to be a little more interested in this particular area.

Like most libraries, our funding resources must be diverted from the personnel budget or the materials budget. We don't have much money to turn to other than those two categories. So we looked at a shifting of funds. Realizing that we weren't likely to get new funds, we turned to those two areas. We recognized the need for a professional preservation position long before we were able to implement it. In their first report, the Preservation Committee recommended the creation of a full-time professional preservation librarian; they recommended that about ten years before we were able to implement it. When the time came that we could make that change, the staff was so aware of the need that it had broad-based support. We had only two full-time people in our bindery unit, and they happened to retire at the same time, and so we elevated one of those positions to a full-time preservation officer in 1989. We chose a person on the staff to become the preservation librarian, the woman who had headed the NEH Kentucky Newspaper Project for us. In terms of her responsibilities, we recognized that although we didn't call it preservation, we were making a number of preservation expenditures. So we tried to pull all of the preservation-related activities and expenditures under that person; the commercial bindery, the in-house bindery, and the microfilm center, which had existed in our library since the mid '50s. Then we made her, by virtue of her position, chair of the ongoing preservation committee and a library-wide bindery committee. This individual has been able to improve our book repair and in-house bindery procedures, looking at the obvious kinds of things such as supplies, acid-free materials and so forth. This kind of money we have tended to take from the book fund or from the bindery portion of the book fund. On our campus we stand a better chance of getting increases in the book fund than in any other category. And so those expenses, even though modest, have come from the bindery portion of the materials budget. This person has rewritten and rebid our commercial bindery contract, although the effort there was probably more from a business point of view rather than from a preservation point of view.

She evaluated our off-site storage facility. We have a lot of materials stored in an underground limestone cave near Lexington, which generates more interest than we care to have from time to time. But she has worked with us very carefully in terms of looking at the humidity in that facility. The temperature is fine. The security is fine. We've got humidity under control as well. We've been trying to get a new building program under way on our campus for a long time, and when we moved some library materials to the cave, it got a lot of local publicity. That's the single thing that caused the new library building on our campus to be the number one capital construction project. Had I known that, I would have moved things to the cave a long time ago!

This person also reviewed our fumigation program. She's brought some SOLINET preservation workshops to Lexington, and she has had some state-wide influence.

Our Council on Higher Education, which is our state coordinating board, has had a library study under way for the past year or two. And because of some of the SOLINET workshops and the work of our staff member, one of the key

recommendations in the Council on Higher Education's study concerns preservation. There are only about four or five recommendations in the whole report. And, of course, this has an impact for all of the state-supported schools, and our state coordinating board has adopted that report. For the state at large, there's now a preservation plank in the Council on Higher Education library report.

The preservation librarian has continued a lot of staff training sessions using AV materials produced other places and has worked with us in preparing proposals. Our current proposal with SOLINET was done co-operatively with the University of Tennessee. Especially for a place like the Unversity of Kentucky, it is important to look to other institutions for cooperation in this particular area. We've begun to do some preliminary work in that regard with the University of Tennessee at Knoxville and I'm looking forward to continuing that. We've also had some cooperative efforts with our state library, which is about 30 miles away. We have used them to deacidify our materials from special collections. We have also worked on a Title II(c) project with them.

In March of this past year we participated in ARL's Preservation Planning Program. That reinforced the staff's preservation interest, and some of the detailed work let those people develop preservation expertise that they didn't have before. Most of them had the interest, but the program turned some of that interest into expertise. The preservation librarian is currently beginning to implement the recommendations of the self study, and we started that this past July. The preservation librarian tells me that the self study accomplished in nine months what it would have taken her about five years to do had she had to do it on her own. One of the most significant things that came out of that for us was getting our collection conditions documented. We know what our preservation strengths and weaknesses are. We know what our needs are. And we have presented that to the administration for funding, part of it on a nonrecurring basis. Nonrecurring funds are a lot easier to get than recurring dollars. We've got a long-range plan that we can follow, and even though we have to move in rather small steps, a preservation program lends itself to implementation in pieces.

The major concern, of course, continues to be staffing. I've forgotten how many new positions the preservation librarian wants—probably five. That's not likely to come. So she has to continue to work with this Preservation Committee and with the Binding Committee. She's explored a couple of other things from a staffing point of view with some success.

We've had some field experience students from our College of Library Science who are interested in preservation, and she's had a couple of good students in that way, students who get credit rather than dollars. She's used some work study students. We have explored but not implemented, using some of our Friends of the Library volunteers. We have about 20 volunteers who work within the library system, most of them in special collection although not all, and this person is interested in seeing if we can find a volunteer interested in preservation. A modest but rewarding program is one in which our local public school system brings mentally handicapped students in for work experience. When they came to the library, our person who works with personnel, wanted nothing to do with the program. Somehow we got a couple of students who began making some boxes for damaged materials in special collections, and it was rewarding to see how that developed. The students took a lot of interest in it, and even brought their parents in to what they were able to accomplish.

The last thing I'd like to mention is what preservation has done in terms of our new building planning. We're planning for a totally new $60 million central library. I think the preservation activities that we have undertaken are likely to mean that that new building is going to be better than it might have been otherwise. And the preservation librarian has already recommended a preservation consultant to work with the architect on the new building. We've debated a lot of preservation issues concerning the new building that simply would have been passed over otherwise.

We found that there are some preservation activities that we can do with limited funds. It's going to take us a lot longer to accomplish what we want to accomplish in the preservation program, but we've made a start and I think that's significant.

"STRATEGIES FOR INCREASING PRODUCTIVITY"

Scott Bennett
The Johns Hopkins University

MR. BENNETT: Library directors are haunted by the fear that we have already lost our race with time, that there is not time enough to save everything we wish to save, and that we must therefore manage our preservation activities to develop a kind of intellectual triage. The best way to make this haunting vision of our future come true is to give little attention to the productivity of our preservation departments. Questions of productivity must become as central to our discussions of preservation as they are to cataloging.

This refocusing of management is vitally important if we are to escape the dilemma of not having enough time or resources to save everything that should be saved. The survival of our verbal heritage, after all, is at stake. There is much that library directors can do to increase the productivity of preservation programs, especially by working smarter and by working with a sharper focus. Let me suggest some overall strategies for increasing productivity along with some specific tactics.

First are two overall strategies. Library directors and preservation officers ought to regard the ARL Preservation Statistics as a set of options for program design. Together they should decide what they want their program to accomplish and how they will strategically allocate their resources. In doing this they need to think much less of the number of treatments to be performed and much more about how the program will serve the needs of readers. This is nothing more than ordinary good management practice, but it is the essential first step toward increased program productivity.

A second strategy for increasing productivity is to focus the preservation program on readers' needs rather than on the objects being preserved. Many of our programs started with a concern for rare books and with the value of books as artifacts. These remain important considerations but they should no longer dominate program designs. Our programs should reflect a library rather than a museum orientation. We need to give even greater attention to our readers' needs to have ordinary circulating collections maintained in serviceable condition. We need to conserve whole collections of material, not just individual items. We should treat large numbers of items inexpensively, employing treatments that lend themselves to high volumes of production. We should treat existing problems and employ inexpensive preventive measures where possible. We should be willing to leave conditions untreated that time or expected use will not exacerbate. Such phased treatments will enable us to stretch limited resources and to deploy those resources in line with actual reader needs. In this way we will shift from a handicraft mentality for treatments to a production mentality. In this way we can make time an ally rather than an enemy in our preservation work.

Now let me describe some specific tactics for productivity gains. Individual libraries, in defining the objectives of their own preservation programs, will determine where the best opportunities for productivity gains are. Even so, the programs we all manage have enough in common that it may be useful to identify four specific arenas for enhancing productivity.

First, ARL libraries collectively spend some 35 percent of their preservation budgets on commercial binding. We can considerably enhance the serviceability of those bindings by insisting that vendors preserve sewed text blocks whenever possible, use damaging oversewing only as a last resort, avoid injudicious cropping of margins, and employ a much wider variety of bindings to serve the different intensities of anticipated use. It is possible through well-managed relations with binders to lower overall binding costs while improving the serviceability of rebound materials.

Second, preventive medicine is as cost-effective for books as it is for people. It is possible to keep circulating material in good condition for readers by an aggressive, production-oriented mending program. Such mending is the key element in any collections conservation program. The focus here is on level one and level two conservation treatments reported in the *ARL Statistics*. Most of the work can be done by relatively inexpensive student employees. One mark of a successful, highly productive mending program is that, through early intervention, the number of books which would otherwise be sent for more expensive commercial rebinding is significantly reduced.

Third, mass deacidification is a critically important and highly productive element in a collections conservation program. Aside from good environmental controls, there is no less expensive way to stabilize the condition of great quantities of books, journals and other paper material, thereby extending their useful life for readers and vastly lowering the future need for and cost of reformat-

ting. By dramatically reducing the need for reformatting, we ensure that reformatting can and will be done in response to actual levels of use that justify the high costs involved.

Fourth, preservation reformatting is labor intensive and incurs high unit costs. Moreover, much of the value and the cost of our present reformatting practices relates less to preservation and more to enhanced access. We have structured reformatting practices, including those for cataloging, multiple masters and for secure storage, to make the preserved material more accessible than it is in its original paper format. Surely reformatting will be most productively used when it is employed only where there is a need for this improved access. Reformatting programs are now designed essentially to provide publication on demand. This is a highly valuable and productive redesign for some brittle material, but not necessarily for all of it.

Increased productivity in reformatting depends more on making this critical distinction between the values of preservation and the values of enhanced access. Overall, librarians face a set of stark choices in the management of preservation programs. The best way to guarantee low preservation productivity is to focus on the item to be preserved and to try to save it forever. This is the equivalent of trying to beat the second law of thermodynamics, and we know that can't be done. Alternatively, if we structure our program strategically to meet actual reader needs, if we focus our resources on the circulating collections, and if we move from a handicraft to a production mentality in managing treatments, if we adopt inexpensive preventive measures, and if we employ treatments that are responsive to actual levels of collection use, we can substantially increase the productivity of preservation programs. And by doing that, we may move from operating triage programs to managing comprehensive and effective preservation programs. More importantly, we may free library readers from a future that is impoverished by the loss of important parts of the record of human experience.

"STRATEGIES FOR REDUCING THE PRESERVATION BUDGET"

Joesph Rosenthal
University of California-Berkeley

MR. ROSENTHAL: When I agreed to speak on strategies for reducing the preservation budget or strategies for living with a reduced preservation budget, I realized it was not a topic that carries built-in positive emotional appeal. So I'll try to be brief so as to spare the pain.

I'm speaking from the viewpoint of a librarian working where downsizing is a reality—downsizing, rightsizing, outsizing, whatever one wishes to call it. One option we should all recognize (and if we put it into practice, we should realize what we're doing) is simply to slash the preservation budget to the bone and let the books deteriorate. It's a real option. Second is a sort of built-in solution or panacea. If there is a real decrease in acquisition funds, over the course of time the need for preservation will, relatively speaking, diminish. There simply won't be as many things to preserve. There will be fewer serials to bind, and we will save a lot of money that way.

Last year we canceled subscriptions for 3,000 serial titles. Over the next decade we'll presumably have far fewer serial volumes to bind. I want to echo things that Scott and Paul said and to reinforce the idea of riding herd on the library's preservation and collection development staff and on external contractors to instill and maintain a high level of cost consciousness. We should reserve rare treatments for rare materials; develop and adopt inexpensive techniques for encapsulation, for enclosures, phase boxes, for binding and repair; and review the levels of binding. How many items really need class A treatment?

The University of California-Berkeley has decided, with the realization that the funds allocated for preservation will simply not cover everything that we wish to have bound, to adopt a variety of specific binding techniques and treatments. Berkeley's adopted the policy of reviewing items that come in and placing some soft-bound items on the shelf without further binding. Such decisions are based on anticipated use and generally apply to items that are thought to get low use. Some of those items are being sent to our remote storage facility where the temperature and humidity conditions are better than they are on campus, so we help preserve them that way.

I echo Scott's theme of selecting for conservation treatment the items that need attention based on the known and anticipated use that they will receive. Does everything really need to be saved? Ken Harris says that the perspective of the archival community differs from that of the the research library community on the point of considering that everything that a library takes in needs to be preserved for the extent of foreseeable time. Let's face it—in many of our libraries the budget situation will mandate selection choices among those items needing and sometimes crying for preservation. If we can make selections based on solid, valid, justifiable and defensible principles, we will be at least spending our available money in ways that we think are best suited for library service. I sometimes ask myself if the threat of deteriorating collections is as severe as it is is held to be. Many seldom-used books, even though they are becoming brittle, can and will sit on the shelf for a long time before they are lost forever. If in that course of time, our funding situations become better, perhaps we will be able to rely on more organized and more effective national or North American programs.

To harken back to something that Paul raised, in some budgetary climates, the prospects for gaining capital construction funds may be better than for sustaining or increasing operating funds. And in many situations, the best investment for preservation that can be made is to create an environment that is favorable to the preservation of the collections. So administrators may want to put their efforts towards getting funds for capital construction, where temperature and humidity controls can be instituted to improve a situation.

Finally, invest in cooperative ventures. You save this, I'll save that. This, in fact, is the basic premise on which the NEH grant support is given in order to reduce, if not eliminate, duplicative work through reporting to RLIN and OCLC items being given treatment. The direction of cooperative efforts can be extended. Consider sharing expertise. Hire a conservator or some other kind of specialist with joint funding by two or more libraries or by a combination of libraries and museums. Develop a joint contract for restoration work with another library or museum, buy equipment in concert with another entity, and apportion its use based on the contribution that each organization makes. Necessity forces us to do a lot of things that we might not have otherwise thought of, and I'm sure there are many more creative solutions to our present budgetary situations.

"THE FUTURE OF CONGRESS' MASS DEACIDIFICTION PLANS"

Kenneth Harris
Library of Congress

MR. HARRIS: There were some very common sense and balanced comments about preservation options already this morning, and I'm not here so much to champion mass deacidification as to applaud the comments that have already been made about it as one of the available and useful options in a balanced preservation program.

There are several people in this room who attended the very well-received ARL-NEDCC jointly sponsored Roundtable on Mass Deacidification in Andover Massachusetts last month. I understand from two people from the Library who attended that there was a consensus, or at least a near consensus, that further development of mass deacidification is worth the time and effort and that we should all continue to devote our active attention to the subject.

I'm here this morning to tell you that the Library of Congress was a party to that consensus, to allay any misapprehensions you may have, and to quell rumors, some I've heard myself, that have been surfacing about the Library of Congress folding its tent and fading away into the night because our recent, arduous two-year contracting effort resulted in a decision not to award any contracts for mass deacidification services at the present time. We've devoted a lot of precious time and resources to mass deacidification for the past 18 years. LC is not about to withdraw from the field because a two-year contracting effort didn't result in the happy conclusion that we hoped for and fully expected. Though LC and Congress are just as disappointed as you and the participating vendors are, we and the Congress remain very hopeful that the process-related issues that resulted in our recent decision can be resolved soon so that your institutions, as well as the Library of Congress, will be able to incorporate mass deacidification services into preservation programs in the future. They may be more applicable in some institutions and collections than in others, of course. Some of you have a pretty detailed and sophisticated understanding of what has been occurring concerning mass deacidification in recent years and certainly understand why and how LC made its recent painful contracting decision.

Some of you have even been working very closely with the Library of Congress, others of you with deacidification vendors, and some of you with both. For those of you who wish to know more, though I don't pretend to be "a fountain of infinitesimal knowledge" (Donald Duck used to say that) on this subject, I'll try to clarify a few important points about LC's recent experience and our continuing commitment to the successful implementation of mass deacidification as a preservation option.

After a 16-year research and development effort at LC, Congress directed the Library at our 1989 appropriation hearings to stop devoting all of its time and attention to a single technology, the diethyl zinc (DEZ) technology that was developed and patented at the Library. LC was then required to consider, for its deacidification services all technologies that could meet the institution's technical requirements, as well as safety and environmental needs. LC then shifted its attention to developing performance-based specifications for deacidification needs. In other words, we changed from specifying how to perform deacidification to what deacidification must accomplish in terms of minimum standards applicable to all potential technologies. Preparation of the specifications took more than a year. There were multiple reviews of the draft specifications within the Library of Congress by scientists and administrators, procurement specialists, et cetera, as well as by the General Accounting Office and by an outside panel convened to review the documents. The resulting LC specifications transferred the burden of proof to the deacidification vendors concerning their ability to perform the required services. It is important to understand that, under federal procurement regulations, all of the minimum requirements in our specifications had to be met simultaneously by the vendors. They weren't going to have several chances to pass go.

The major components of the proposal solicitation that we issued in September 1990 were as follows. Among the major concerns were toxicological and environmental safety. We didn't allow any tolerance here. The requirement was simply that there should be no risk and that the vendor should prove it. Another component was technical requirements. They included a mix of both preservation and aesthetic concerns. The preservation requirements included completely neutralizing the acid in books, providing sufficient alkaline reserve, and extending the life of the paper by at least three times, as measured by artificial aging in MIT fold testing. Aesthetic requirements included not damaging the books or their covers, no process-

generated odor in the treated books, and no discoloration or change to the paper or printing. The third component was a business proposal from the firms to design, build, and operate a deacidification facility that would effectively and safely meet the Library's preservation needs. And the fourth component, which was kept secret from the outside panel of technical experts employed to evaluate vendor proposals, was the vendors' cost proposals. We kept this information confidential to avoid prejudicing the panels decisions on other aspects of the proposals. In fact, the cost proposals were kept secret from me and everyone else until the evaluation decision had essentially been made. Contractors were required to treat a demonstration set of 500 books to confirm the technical information contained in their proposals and to show compliance with the Library's specifications—in other words, they had to show their ability to do the job. Through a competitive process, the Library selected an independent testing laboratory, the Institute of Paper Science and Technology (IPST) in Atlanta, to perform tests on the demonstration sets of books that were treated by the vendors.

In March of 1991, a 14-member evaluation panel called the Source Selection Evaluation Board, headed by Peter Johnson of the Office of Technology Assessment, convened to evaluate the written proposals, the data obtained from the independent testing laboratory, and the firsthand information that the evaluation panel gained on site visits to the treatment facilities. The Board included an industrial hygienist, a paper chemist and other preservation scientists, chemical engineers, industry executives, conservators and Library administrators. All but three of these people were from outside the Library of Congress. It was an impressive and dedicated group of professionals represented by some people here in ARL. I think it is reasonable to assert that they all had every expectation, when they committed to serving in this effort, that their labors would result in LC awarding one or more contracts for deacidification services. The entire evaluation was very intensive, positive, and even-handed. The final results of the solicitation were not anticipated. The need to simultaneously meet all the minimum requirements proved too difficult for the three firms that responded to the solicitation. None was able to meet all the technical and business requirements. The results of the testing of the demonstration sets were disappointing, to say the least. All of the offerers had trouble with their demonstration sets. In fairness, though, I should point out that some of the firms have been working actively to resolve these process-related issues that they encountered when they treated sets of books for us almost one year ago.

There is some additional good news. The Wei 'To, FMC and Akzo processes each extended the life of paper by at least three times. One of the processes met all of the preservation requirements but had difficulty with some of the aesthetic requirements. There was process-generated odor in books and iridescent rings or discoloration on some of the bindings and illustrations on coated and highly calendared papers. Two processes had trouble with the completeness or evenness of deacidification and the adequacy of minimum alkaline reserve. There were aesthetic problems with tackiness of covers and with ink and text block concerns, such as cockling of pages. At least one of the processes caused minor physical damage that probably could not be tolerated by any library, namely the separation of call-number labels from the volumes.

Based on these findings and the business considerations, the Library of Congress decided it was not prudent to go forward with a contract at this time. In spite of what I've just described—though this may seem anomalous—our assessment of the situation is optimistic. Mass deacidification remains an essential component of our Library's total preservation program. We think that the outstanding issues raised by the procurement effort appear to be resolvable. We will move ahead with our program as quickly as possible. The consensus of the Evaluation Board is that deacidification technologies will be able to meet the objectives of the Library and archival communities.

We have committed ourselves to going back to Congress as quickly as possible. The information-gathering phase of this planning effort is currently under way. Our project manager and senior staff chemist have been traveling extensively in Asia, the United States, Canada, and Europe to compare notes and gather the most comprehensive information that we can about world-wide deacidification efforts.

A comprehensive set of options will be considered before the Librarian recommends a plan of action to the Congress, hopefully in the next couple of months. At this point, I can only characterize any future LC plan of action in the broadest of terms, because we haven't yet completed it. It will, of course, involve a mass scale process. That is essential to making a meaningful impact on our preservation needs and I'm sure on yours. The program will employ a more incremental approach, anticipating rapid but orderly expansion of deacidification services as experience with the program allows.

We have a strong commitment to information sharing—at least up to the point where we're prevented from doing so by federal acquisition

regulations. We will consult actively with many of the major people and institutions who are engaged in exploring these technologies, and we will make every effort to keep all interested parties apprised of our progress. In that connection, you probably know that we can't discuss in detail the conclusions of our recent Source Selection Evaluation Board; nor can we interpret or evaluate for anyone the raw laboratory data that was furnished to the Library of Congress by the contracted testing lab, IPST. To the great credit of those who bid on our recent solicitation of proposals, I should indicate that each of them has given the Library of Congress written permission to share copies of the IPST laboratory data with other institutions to help them make decisions about how to pursue their mass deacidification initiatives. In response to a recent press release by LC, the first printing of the raw lab data, which consists of four volumes, each of about 350 pages, has already been exhausted. We will initiate a request for a second printing. Some of you have already received copies of the four volumes of lab data. Anyone else who is interested in receiving a free set, and who has access to technical personnel who can interpret it, can request copies from my office. You can write to Gerald Garvey, our mass deacidification project officer, at the Preservation Directorate, Library of Congress, LM-G21, Washington, DC 20540. Thank you.

MR. BENNETT: I want to report that we did our testing with two of the three vendors at approximately the same time as the Library of Congress and we saw the same kinds of results that they did. I wanted to emphasize that the incidence of unwanted effects is, we thought, pretty low. Since June, we've been sending, on a regular contractual basis, material for deacidification to one of the vendors, Akzo, and we have observed quite noticeable and dramatic improvements in the performance. We started with a worrisome but low incidence of damage and we are now at a very low, but still worrisome, incidence of damage.

MR. STUDER: Thanks to all the panelists. We have about 25 minutes left for discussion, questions, challenges, and added information.

MS. SMITH: I'd like to address one matter of concern to the Smithsonian. We've had a book conservation lab in place since about 1975; it is a rather sophisticated operation of modest size. In 1990 we received funding to begin a brittle book program, which is now under way. My concern, and one that I did not really hear from the speakers, is the staffing of these kinds of activities with people who have the right background and experience. When we looked for a preservation officer, we had a very difficult time with the search and had to conduct two. Our book conservation lab is headed by a Dane who received his training in Denmark; he is about to retire and we are very concerned about finding a replacement. What are we going to do to see that there is a cadre of trained professionals to deal with preservation, both the management of ongoing production activities and the handicraft side?

MR. STUDER: That is a very good question. I know that the Commission on Preservation and Access has been concerned with education in this field. What has happened at Columbia is very worrisome. I don't know where that situation stands. There were rumors of another institution taking that program over.

MR. STUDER: I don't feel very well versed in this area of education and training for preservation specialists. There are more programs than at Columbia, but clearly the number is not great. We have turned to internal training and apprenticeships in our major binding area for many things because we did do a national search and couldn't turn up anyone. Often salaries are such that it's hard to attract people who have true expertise.

MR. ROSENTHAL: We've had a program at Berkeley in 1985 or '86 based on an initial program with NEH support that was oriented toward the other University of California campuses. It was a program that brings people into Berkeley for two or three-week periods during the course of a year.

The first program was for conservation administrators. They came for three-week periods five times during the course of the year, four people during the first year and four people from the other four campuses the second year. They went through a very formal program that included bench experience, budget preparation, and bibliography preparation. But the most important part was that between the intervals when they were at Berkeley, they went back to their home campuses and started developing a preservation plan for their own institutions. The program was quite successful in starting to build a base in the other UC libraries. A few years later we started a similar program in terms of structure, but with quite different content oriented toward technicians. And we're at the point now where we are thinking very positively of extending the program to people who are not necessarily within the University of California. This has some implications for our own work load and our own staffing, some of which are positive and some of which are difficult for us. But it is aimed at extending the corps of trained people.

MR. HARRIS: The situation at the Smithsonian is a little bit different than it is for many people in the room. In conservation, as in many other professional fields, there hasn't been much emphasis on training administrators in the past. Many of the people that have supervisory and administrative experience in the preservation field in this country have learned on the job, with the exception of the people who have come up through the Columbia preservation administration program. What is different about your situation, of course, is that there's a fairly large pool of rare book and binding conservators in Washington, D.C. So you may have less trouble finding someone; but I won't say publicly that you'll replace the particular personal or technical skills easily. Nor do I know how easy it will be for the Smithsonian to attract someone to your lab because I'm not personally familiar with the scale of operations in the lab.

It is a fair generalization that even large conservation programs at institutions like the National Archives and LC, which have 30 or 40 conservators, have only two or three supervisors. In moderately small institutions, there's a preservation officer. So the number of people with useful experience that you can draw from is limited.

There is a useful product that the American Institute of Conservation (AIC) puts out that isn't really aimed at your question, though it may be helpful. It's called, "Guidelines for Selecting a

Conservator." It's a publication that is distributed for free, but it does not tell you how to choose an administrator.

MR. FARR: When we had the opportunity to submit a plan for enhanced NEH support for preservation to Congress, we thought education and training was one of its most important components.

We have supported, from the first, the Columbia program and a variety of other kinds of shorter term educational opportunities in preservation.

I must tell you, however, that we have not received any applications and barely any inquiries from other library schools (despite our encouragement and the the potential availablity of funding) to begin programs similar to the Columbia model, since we launched our expanded set of activities. There may be some obvious reasons for this. When there is a struggle simply to keep library schools open, it is probably very difficult for them to come forward with a plan to enhance existing programs. And there is the added set of issues about just how this education should take place, whether it should be seen as a separate program or whether it should be integrated into other traditional courses for the advanced degree. We are awaiting developments in this area and we continue to welcome applications for preservation education and training.

I would like to remind you that in addition, we've opened up a grant category for preservation administrator stipends. This allows an experienced manager in a library or an archive, who already has administrative experience, to be trained as a preservation administrator. The stipend is equal to that of a senior fellowship at NEH. The point was to enable people who already had a sense of how libraries and archives work to be trained as preservation administrators. In this way, we thought we could satisfy some of the needs that have been expressed for a person with these qualifications in libraries across the country. Presumably the person would take the stipend and attend the Columbia program.

MR. BENNETT: Johns Hopkins has been in the business of training through apprenticeships for many years now, and we've had Mellon Foundation support for that. We just completed a multi-year Mellon program last summer. We have wanted to continue this work, and applied to NEH to enable us to do that. We expect to be starting a new set of workshops in about a year. This activity is part of the tradition of apprenticeship training in preservation. Our apprentices have been people who primarily end up doing technical work at the bench. But we also have people from institutions who want to grow their own administrators and see this kind of apprenticeship exposure as a good way of doing that.

MR. STUDER: The recommendations based on the analysis of the Commission's work in its first five years contain a significant recommendation to do something in this arena to stimulate the availability of those candidates.

MS. BATTIN: We're faced with the situation where we have to sort out the distinction between the technical specialist's and the manager's responsibilities and needs as we move into these much larger programs. We must move away from an emphasis on individual artifacts for conservation. You're looking for a different kind of a person to manage these projects, but at the same time we need the specialists as well. There's been some confusion as we have tried to sort all this out.

One of the major problems is the need for senior mangers. Let's say someone goes through the Columbia program. He or she comes out with no managerial experience, and they need, like all the rest of us, 15 or 20 years to become experienced enough to manage one of these very large production programs. What we're going to need for an interim period is a combination of formal educational experiences and some kind of a career pattern inside a library that enables the person to gain that sort of experience within that library structure. It would be similar to an historical example of libraries with one cataloger suddenly faced with the need for an individual with the technical background to run a huge program with no interim experience. So we're trying hard to sort some of this out to determine the best way to proceed. I'm convinced there's going to have to be a combination of education and experience.

MR. STUDER: Do you think when the Commission considers the findings and recommendations of the Review and Assessment Committee's final report that the Commission will have a renewed focus on training and education?

MS. ABELL: I make no presumptions.

MR. STUDER: As far as I can see, it's a critical issue. Let me say that very few of us have any real life experience with submitting items for deacidification to one of the major vendors. There are three, but I think in terms of large-scale operational realities, there may be only two. We've done that in the CIC (Big Ten plus the University of Chicago). Scott's been at it for a while. Con-

necticut has done some things. Harvard has a contract with Akzo for the DEZ process. We're going to spend a very small amount of money beginning sometime late this winter. There is collateral damage to some of the materials.

I know quite a bit about the Library of Congress situation. I was a member of the Source Selection Review Board, which was a very educational and enjoyable experience. The outcome was very disappointing to all of us because when we had our last meeting, we didn't think it was going to turn out the way it did. It's clear to me that it's going to take a good deal of time and effort working with the vendors to refine the processes so that collateral damage is minimized. Scott says that he has experienced a decline in the obvious damage. I also think you can minimize it by selecting the materials. The whole notion of mass deacidification has been tempered by experience and research. I don't think it can be mass; you can't go and sweep a shelf clean and simply send everything off without further thought. There is going to have to be selection. But I think that the report a year ago from the CIC representative studying the more pragmatic issues of mass deacidification behind the scenes and what needs to be done prior to shipment and upon return of the materials, would suggest that that selection is not a terribly expensive process. That is, it's not going to add a lot to the unit cost. But how much damage are we willing to sustain in order to preserve the paper content? It's going to take some hard swallowing on the part of some library administrators. Will you take a cockled book back? Is it better to have a cockled book that will last 300-400 years than to change it to a microformat within the next 50?

MS. MERRILL-OLDHAM: Every library is going to look at this and approach it differently. The strategy that we have adopted at the University of Connecticut, for example, isn't really applicable for libraries that have not yet developed a collections conservation program. We have opted to work within the existing limitations of deacidification technology and are contracting for DEZ treatment. From everything we can gather through our own observations and testing, and the observations and testing of others, uncoated papers can be alkalized and buffered very successfully using DEZ.

Regarding risk to the collections, a large percentage of the materials that come through our conservation lab is from general collections and does not have high artifactual value. It does have high informational value, and much of it is heavily used. Take, for example, a local, 19th-century colored atlas. It may well be so fragile as to be unusable. Microfilming or photocopying would result in the loss of a significant part of the atlas' information. Years ago we treated such materials in-house using a chloroflourocarbon-based chemical. We don't use CFCs these days, and therefore do no non-aqueous deacidification in our lab. Instead, we are setting aside those brittle volumes that formerly would have been disbound and deacidified in-house, encapsulated, and rebound. We are also setting aside brittle unbound sheets (such as maps) and sending them out for commercial deacidification. In doing so we relieve ourselves of the burden of a questionable practice that poses a threat to the environment and free up staff time that can be allocated to other conservation work.

Given the amount of money that we have to devote to mass deacidification ($5,000 this year), we are able to treat more material commercially than we could otherwise have handled in the lab. At the same time, we hope we are providing Akzo Chemicals with a bit of encouragement, which is very important at this time. In short, we have simply shifted some of our routine work to the commercial sector. We have not established a new program element.

We make our selections by working directly with bibliographers and selectors, and intend to use the Collection Management Committee as an advisory and decision-making body as our deacidification efforts become more regularized. We also hope to be able to treat a small number of materials withdrawn from, or not added to, the collections, that have proven to be problematic for treatment. These would include, for example, books printed on heavily coated paper or books with heavily laminated covering materials. In this way perhaps we can further vendors' efforts to work the bugs out of treatment systems.

MS. ABELL: One of the real values of a program like this is that it gives us an opportunity to test and challenge assumptions. One of the underlying themes of most of the speakers was testing and challenging assumptions within their programs and their institutions. Scott made a point when he was making the four major points about including productivity, which I found very intriguing, and I assume I know what he meant, but I'd like to test that. You said the cost of reformatting is largely the cost of access, and I'd be interested in your spinning that notion out a little bit more.

MR. BENNETT: I don't know that I want to say that it's largely a cost of access. I want to say that there are very large access costs in it and that some features of the program design relate very clearly

and primarily to questions of access. An important feature of the program, the ability to reproduce on demand, is most fundamentally an access issue rather than a preservation issue. That is, the program is designed to provide better access than we have today. I'm arguing that we should apply a standard to this activity that we apply to other things. That is, do we need to improve access? Is there a real market demand? Are users asking us to do that? Especially in a world of increasingly limited resources, it seems to me our programs become much more productive if they are tied to our readers' needs. I believe it is true; I have not done a systematic survey of this, that there is very little demand now for the replication of the masters though we are so faithfully producing and storing away. And speaking only for myself, I find it hard to imagine that, as things disappear from our shelves because they just become unusable, we are going to invest in a massive restocking of those shelves.

MS. ABELL: I find this one of the most interesting areas for debate in the entire issue of preservation. I think very much of what we're doing right now turns on it, including the question of investment and effective investment. Someday it would be nice to talk about it.

MR. HARRIS: I think, without seeming trite, that the issue of there not being much demand for the microfilm publications that have been generated, is just another area where we need to learn from the private sector. I think libraries and archives generally don't do a sterling job of marketing things that we spend a lot of resources on. I have spent most of my professional life in the National Archives, which has produced 500,000 reels of microfilm and has a good marketing program. As a result of marketing their publications, as many of the commercial vendors do, they've got millions of dollars in the bank in their trust fund. Library of Congress, during the same 40-year period, generated the same number of micromasters but didn't market them as aggressively until recently. So marketing what we produce can generate resources for our preservation programs.

MR. STUDER: Part of the issue is something the Commission has been thinking about in its lifetime, and that is a discreet database of preservation microfilm masters. If there were one place to search, it would become a tool in and of itself.

MS. BATTIN: More than that, if there were one place to find it, much frustration and failure would be eliminated. We get so many complaints because people often can not find what they want so they give up.

MR. STUDER: Yes. Those go hand in hand. A centralized depository or source availability. Plus, a database of a million or more titles where everyone in there is available through production on demand would be a great marketing tool.

MR. BENNETT: I wanted to return briefly to the question of what our experience with the damage done during mass deacidification is. We respond to that in four ways. One is just a mindset issue. We remember that that's not the only way in which damage is done to library materials. And so it's ordinary business in that sense. The second thing we do is to count the damage so that we know how much there is. Depending on what you're counting in our tests, damage ranged from 5 to 15 percent of the population. The other thing that results from counting is that we see the counts go down as we do more of it. The third thing we do, in order to get those counts down, is to work in a partnership arrangement with our vendor, Akzo. And the fourth thing we've done is to write provisions into our contract on who pays for repairing the damage. It seems to me it would be quite a manageable issue.

MR. STUDER: Let me end on another mass deacidification note. We live with the perceived threat that if the library community does not act soon, that one or more of these vendors could fade into the night. They are all very, very small subenterprises within mega corporations where decisions about viability can be made quite independently of the immediate staffs who seem to have a commitment to continuing the process. They are not making money, no matter how many of us do small scale business. Johns Hopkins' and Harvard's will be the largest contractors, but still spending less than $100,000 a year. They're a long way from making money. So I am still very apprehensive that if more of us do not get into the business of making this a commercially viable service, it could still fade away, and where would we be then? Back to the Library of Congress to develop one on its own. What LC decides to do in the near term in this arena is going to be very important.

ACCESS TO INFORMATION RESOURCES

Nancy Eaton
Iowa State University

MS. EATON: Good morning. The Committee has asked me to do a quick overview of the white paper, which I understand was printed on orange paper. I will try to do that just to jog your memories about what is in it (see page 51). We would like to leave the majority of the time for open discussion.

We'll take the paper section by section, though we would like to leave some time at the end to come back to the prioritization of these issues in terms of what the Committee should be focusing on for the next five years. We are also concerned with how the Committee should be coordinating with other ARL units, such as the Coalition for Networked Information and the Committee on Scholarly Communication, because there may be areas where we have overlapping interests, and we need to coordinate rather than duplicate our efforts.

As we indicated in the paper's cover memo, this is really a discussion document. We're trying to focus on the efforts that the Committee should be making on behalf of ARL for the next five years. We tried to summarize where we think we are with electronic resource sharing, and then pose what seem to us important discussion questions that would then help us determine activities. The paper is a summary of last spring's Committee discussions, which were written up and distributed; substantive comments came back from Committee members. I would like to recognize those individuals: Shirley Baker from Washington University; Paul Fasana from New York Public Library; Bill Potter, University of Georgia; Ingrid Parent, who is here representing the National Library of Canada on behalf of Marianne Scott; Barbara Von Wahlde from SUNY-Buffalo; Gloria Werner from UCLA; and Henriette Avram, liaison from the Library of Congress. This is a wonderful group to work with. Until last year, this committee was called the Committee on Bibliographic Control. It now has a new charge and a much broader focus on information access.

The intent of the white paper was to redirect our efforts toward the new, much broader role. And as a result, we do overlap with other activities in ARL. I'm going to briefly note the highlights of the paper, which were presented in seven areas.

On the issue of the changes in bibliographic networks, we focused on the fact that networks were begun to try to reduce the costs of cataloging and processing, and evolved in two important ways. The networks started out with a very narrow range of services and products and have evolved to a very large number of products and services. And second, economics are putting some major stresses on the networks, and although it is certainly not clear or necessarily desirable that we would reduce to one network, it is not an impossibility; and that poses some questions for us.

We highlight the fact that we're now moving beyond bibliographic control; the role of this Committee is now to cover information access in general. The Committee took some language out of the original charge, which also put us in the mode of looking at public services. We have technically restricted our focus to the issues of access, and that's important for you to know. We are focusing on the fact that we're now generally talking about transfer of data, including full text graphics. That raises a whole host of issues about standards that takes us beyond the MARC standard. So we have asked you a series of questions about what other kinds of activities we should be involved in.

In terms of delivery mechanisms, we highlight the fact that the telecommunications networks have evolved and that we are now dealing with a very complex mix of private networks—our own campus networks, a variety of public networks, et cetera. We have posed some questions for you in terms of how we think that will play out and over what periods of time. We raise some issues about the impact of regional and local networks, primarily economic issues for the national utilities because they have relied on a bundled set of prices for cataloging and holdings. That is now beginning to be affected by holdings in local or regional systems only. This raises the spectre of weakened national networks, and we'd like some discussion about your views on that and what role ARL should be playing. It also raises some issues of shifting ethics as we deal with cost-effective services and whether they may conflict with our more traditional values of cooperative activities.

We raise the issue of the national libraries. There is a very brief thumbnail sketch of the activities at each of the national libraries, both in the U.S. and Canada. We raised some issues about their future roles. That will be a topic for the Network Advisory Committee at their December 1991 meeting. Henriette Avram has indicated that she will ask the NAC participants there to comment on this paper too, so that we will be getting some external reviewing as well.

The next-to-last area of the paper has to do with document delivery. If libraries are, in fact, moving toward a model that stresses access to information, which requires access to local holdings, it will place a whole new level of demand on the research libraries to be responsive to delivering the documents; and we don't have an infrastructure or a pricing system that can support that. That is of particular interest to the Committee now because we don't believe that we have paid enough attention to how we're going to support document delivery.

Finally, we return to some recommendations from an earlier NAC paper that supported the idea of an evolutionary national network. We pose some questions for you about whether that is still our view and, if so, what ARL's activity should be in supporting the move toward a distributed national network.

I would like to turn to the discussion. On the first item, changes in the bibliographic networks, we've listed four questions having to do with the relationship between networks and what might happen in terms of protection of public good, if we move to a few or to only one network.

EVOLUTION OF ELECTRONIC RESOURCE SHARING

A WHITE PAPER

Prepared by the ARL Committee on Access to Information Resources
For the October 1991 Membership Meeting

BACKGROUND

To advance ARL's strategic goals for the 1990s, the ARL Committee on Access to Information Resources undertook a review of its charge and of the issues associated with electronic resource sharing. This initial review resulted in the attached white paper prepared by Nancy Eaton, chair of the Committee, with the assistance of committee members.* The paper identifies key issues and is intended to prompt comment that will assist in the establishment of an action agenda for the committee.

Toward that goal, the paper should be viewed as a working document aimed at provoking comment to clarify issues and identify ARL actions; it does not imply any position on behalf of ARL.

The paper was the focus of a strategy forum session at the October ARL Membership Meeting where approximately 50 ARL directors and guests were involved in the discussion. Because the session was only 75 minutes long the advice given was necessarily of a summary nature. Based on that initial discussion, the Committee tentatively identified the two following activities as priority matters for their attention:

1. Reconceptualize the values and principles that provide the underpinnings of electronic resource sharing; and
2. Reconceptualize interlibrary loan and document delivery, employing technology to make it less labor-intensive and identifying cost models for alternative configurations and delivery mechanisms.

* ARL Committee on Access to Information Resources
Nancy Eaton, Chair, Iowa State University
Shirley K. Baker, Washington University
Calvin Boyer, UC-Irvine
Paul Fasana, New York Public Library
William G. Potter, University of Georgia
Marianne Scott, National Library of Canada
Barbara von Wahlde, SUNY-Buffalo
Gloria Werner, UCLA
Henriette Avram, LC Liaison

REQUEST FOR COMMENT

The paper has been updated to record the points made during the strategy forum discussion and is now being sent to each ARL institution to solicit further comments and observations. In addition, at the invitation of Henriette Avram, the paper is being sent to members of the LC Network Advisory Committee to seek their input into this process.

Your comments on the issues and/or on ARL's agenda in this arena are invited. Please send all comments to Jaia Barrett, Director, Office of Research and Development, ARL, 1527 New Hampshire Avenue, N.W., Washington, D.C. 20036 (fax 202-462-7849, or Bitnet to JBarrett @ UMDC), by January 17, 1992.

INTRODUCTION

Libraries have a rich history of cooperation. Cooperative cataloging has its origins with the Library of Congress printed card service dating from 1902; and the National Interlibrary Loan Code was formally adopted in 1980. In the late 1960s, cooperative cataloging went electronic with the development of the MARC format and LC's MARC Distribution Service and with the birth of online bibliographic networks, most notably OCLC, RLG, WLN, and (in Canada) UTLAS. These early online cooperative cataloging efforts have evolved into complex online services which include a host of products, including online interlibrary loan, cooperative collection development and preservation, and a growing line of indexing/abstracting databases, with full text databases lurking in the wings.

The recent change in name and charge to this committee (from the ARL Bibliographic Control Committee to the ARL Committee on Access to Information Resources) reflects the new environment that ARL libraries are entering and signals a change in focus. Thus, it is timely that ARL members review the past and forecast the future of electronic resource sharing.

Changes in Bibliographic Networks

Bibliographic networks (also referred to as bibliographic utilities) such as OCLC, RLIN, UTLAS, and WLN began with the objective of reducing the costs of cataloging and processing by sharing those costs through cooperative online cataloging. Once the dedicated telecommunications networks needed to support online cataloging and the cataloging systems were in place, the networks added other modules such as online interlibrary loan, acquisitions, serials, linkages to local online systems, collection development and preservation tools, and (most recently) indexing/abstracting and full-text data bases.

Bibliographic utilities have changed in two critical ways: (1) they began by offering a very narrow range of services and have evolved to offer a sophisticated variety of products and services, many which compete with commercial products; and (2) the economics of networking have reduced the number of networks to a very few, with the possibility of a monopoly by one network emerging.

Discussion questions posed to ARL members at the October 24th forum included the following: (a) Do the different networks offer unique programs which are desirable to maintain, or is there virtue to one network for all research libraries? (b) If the latter (or if economics result in one network), what safeguards for the users should be built into a bibliographic utility which is a monopoly? (c) Should not-for-profit networks compete with commercial firms in product development? If so, what is the rationale? (d) What kind of relationships can one envision between and/or among the utilities? Further, what role should ARL play in attempting to forge or promote such relationships?

Member discussion of this area led to the following advice:

- We should maintain a broad vision and try to understand and articulate the new environment in which we are operating and be less concerned about "what has been."
- We need to get back to values and the philosophical questions of sharing information, such as what levels of data should reside where, member responsibilities for contributing cataloging to the national databases, etc.
- We have multiple common interests across many groups and need coalitions and cooperative endeavors with both not-for-profit and commercial allies.

Emergence of Concerns beyond Bibliographic Data

This committee's original focus was on bibliographic control. Reports and concerns in the past have included MARC formats, CIP, NCCP, CONSER, coordinated retrospective conversion, Linked Systems Project, cataloging standards, cataloging simplification and cataloging costs, LC cataloging priorities and management of the LC arrearage reduction, development of guidelines for bibliographic records for preservation microfilm masters, and maintaining open and equitable access to bibliographic records. The emphasis has been on making bibliographic access to research materials more efficient and effective.

Within the library community, concern for transfer of data has continued to grow to include a format for serial holdings. As non-book formats began to proliferate, expansion of the MARC format for such materials as computer software received increasing attention. Attention to the OSI (Open Systems Interconnect) model during the 1980s illustrated the growing interest in having disparate computer systems capable of communicating and transferring records between systems. Emergence of new media such as CD-ROM began to challenge our ability to set standards for the physical media themselves so that the discs would work on multiple hardware platforms from different manufacturers. The emergence of indexing/abstracting databases in large numbers, a variety of telecommunications options, and a host of different software search engines for different information products has created the need for a host of new standards, from a standardized search language, to network protocols, to multi-media data formats.

Standards emanating from NISO and other standards-setting bodies have become of increasing interest as transfer of data other than bibliographic have gained importance. These include the transfer of or access to indexing/abstracting information, table-of-contents services, numeric data bases, and (increasingly) full text and images. The importance of these standards is illustrated by the expansion of this committee's role to include the charge to "Monitor developments in networking and information connectivity and recommend activities to influence the evolution of such network services."

Discussion questions posed to ARL members at the forum included the following: (a) Do we need item level record information attached to our bibliographic records at the national level to facilitate future resource sharing/document delivery at the article/chapter level, or do we envision that Z39.50 or similar protocols will allow us to obtain this information as needed by querying local systems? (b) What additions to existing MARC formats are needed? (c) What other standards should ARL be stressing? (d) What should this committee be doing to support the Coalition for Networked Information to advance the appropriate standards for transferability of information across systems? (e) What are the cost implications for more detailed bibliographic analysis?

Member discussion of these questions led to the following advice:

- Again, clarify values of electronic resource sharing before focusing on techniques, though practical outcomes and applications should not be ignored.
- Linkages are preferable to keeping large central databases which become very complex as they grow. Emphasize routing mechanisms.
- Stress the publishers' roles and get libraries out of adding value to publisher's products.

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Evolution of Information Delivery Mechanisms

Telecommunications networks from the late 1960s through the mid-1980s were quite straightforward, primarily point-to-point dedicated lines with some capability to chain multiple terminals on a line within a library. The major networks such as OCLC and RLIN developed private proprietary telecommunications networks with tailored software that facilitated transactions for library-specific applications over that network.

Since the mid-1980s, telecommunications networks have changed dramatically, both external and internal to the library. Deregulation of the telephone system, development of packet-switched networks, fiber-optics, local area networks and private telephone exchanges on a campus and/or within a library, the dramatic growth of the Internet, the establishment of the National Research and Education Network (NREN), and parallel developments in Canada raise complex issues related to interconnectivity and data transfer across different networks.

The following discussion questions were posed to ARL members during the forum: (a) Do you agree that development of the Internet/NREN is important to future online access to information for ARL libraries? Do you agree with the strategies ARL has taken thus far within the Coalition for Networked Information? (b) What is the role of the private dedicated network such as OCLC's and WLN's telecommunications networks? Do they have a role different from that of the Internet/NREN? (c) How will libraries come to use the Internet/NREN? Does this change how they will use the dedicated networks of the bibliographic utilities? Do they each have a role? (d) How should our campus networks and internal LAN's communicate with the Internet and with the dedicated networks of the bibliographic utilities? (e) How should this committee support the Coalition for Networked Information's efforts to create a functional telecommunications infrastructure to allow for maximum flexibility in moving data across networks?

Member discussion led to the following advice and observations:

* The choice of private dedicated networks such as OCLC versus public networks such as NREN, the Internet, or state networks is not an either/or situation and will be market-driven and dependent on functions and on funding sources.

* Articulate values or principles; make known the objectives of the applications and then examine options.

* The NREN should act as the linking mechanism; stress protocols and connections.

Challenges and Threats of Local/Regional Networks

As libraries have continued to automate local processes via internal integrated library systems and as libraries have often agreed to share a system at a local, regional, or state level, library consortia have begun to provide among themselves many of the capabilities previously provided by the national networks or utilities. They are able to get access to Library of Congress, National Library of Canada, and National Library of Medicine records and load them into local/regional systems, presumably cheaper than the utilities can provide them. The networks (utilities) base their economic viability upon a mix of providing national library records and member records from other libraries; and they bundle the costs. Loss of revenue from national library records and a library's withholding local holdings for those records for interlibrary loan purposes could threaten the ability to provide member records and holdings for all members as well as programs in cooperative collection development and preservation.

Discussion questions before the membership at the forum included: (a) Can we construct a mutually beneficial scenario for the national bibliographic utilities and local/regional networks that promotes the interests and fiscal stability of each? (b) How can the bibliographic utilities improve their loading of data into the national databases so as to encourage receipt of local holdings for activity currently taking place only on the local or regional systems? (c) What would be the effect upon libraries if local/regional networks do undermine the bibliographic utilities to the extent that they cannot survive? Can those functions be provided some other way, or would we lose a critical component to national resource sharing?

Member discussion led to the following advice:

- Stress professional values that we should NOT undermine the national good as we strive for local or regional efficiencies.
- Give options based upon shared values and principles.
- Make sharing of records a prerequisite of ARL membership. One member observed that it is easier to have and maintain a central national database, that the actuality of a "distributed national database" is difficult to execute.

Roles of the National Libraries

The four national libraries (LC, NLM, NAL, and the National Library of Canada) play very different roles within the electronic delivery of information, including but not limited to bibliographic records. And those roles have evolved and changed over time.

Library of Congress—LC has distributed MARC tapes to the utilities and commercial sector via its tape service. Those records can be loaded into the utilities or local/regional systems. The utilities add value by merging them with member cataloging and making all the records and holdings available in one national database. At present, LC records make up about 25% of the total OCLC database, for example. In addition to bibliographic records, LC through its new LC Direct Program has begun to make its own automated systems available electronically to selected sites. LC has ongoing experiments with full text and imaging and with multi-media formats in its American Memory Project. LC has few formal responsibilities to the nation's libraries but has always had a de facto role as the primary national library. LC has played a major role in establishing and coordinating bibliographic and format standards. LC has asked for and received increased appropriations to catalog arrearages. Unanswered questions remain concerning LC's role in national networking vis-a-vis the bibliographic utilities such as OCLC, RLIN, WLN, and UTLAS.

National Library of Medicine—NLM has a long history of research and development in library automation, automated indexing/abstracting, and information technology generally. Many of its current initiatives have focused on medical informatics, and it emphasizes networked activities to medical libraries through a formal hierarchical structure with medical libraries via contractual arrangements. Most recently it has received funding for the human genome project, thus moving into non-bibliographic and non-text databases in a substantial way.

National Agricultural Library—Following its Blue-Ribbon Study, NAL has undergone significant change under new administration. It has cooperated in the development of the United States Agricultural Information Network (USAIN), a membership organization of libraries who serve the agricultural community. These include landgrant libraries, USDA libraries, special agricultural libraries, information centers, and the like. Under various cooperative agreements with specific landgrant libraries and now enhanced by activities of the USAIN Telecommunications and Networking Committee, NAL has begun to pursue the development of a decentralized network for sharing

agricultural information. It expects to use a combination of the Internet, OCLC, commercial database vendors, and NAL-produced CD-ROM for distribution of and access to electronic information, bibliographic records, and indexing/abstracting information. Like NLM, it has received funding for participation within USDA in the plant genome project and has interest in non-bibliographic and non-text databases.

National Library of Canada—The National Library of Canada distributes within Canada bibliographic records in machine-readable form that it creates for the national bibliography, Canadiana, as well as records from other sources such as the Library of Congress, the British Library, and CONSER. Canadiana records are also distributed outside Canada through exchange agreements with other national libraries, including LC. The National Library of Canada has developed and maintains a national bibliographic database representing holding from some 1,000 Canadian libraries. That database is accessed directly for resource sharing purposes by more than 500 libraries, and serves as the basis for the National Library's location and interlibrary loan services. The National Library of Canada has been actively involved for many years in the development and implementation of OSI protocols, especially for support of interlibrary loan and directory applications. NLC plays a key leadership role in the coordination of research and standards development in all areas related to the electronic exchange of information.

Discussion questions posed to members included: (a) What should the role of the national libraries (LC, NLM, NAL, NLC) in networking be for the future? What is their role vis-a-vis the bibliographic utilities? (b) Are the roles of the national libraries changing as sharing of data expands to mean electronic information delivery? (c) What role should ARL or this committee attempt to play in helping define future relationships between the utilities and the national libraries?

Member discussion led to the following advice:

- The national libraries should take a leadership role; and that role must include dialog with colleagues such as ARL library directors and ARL staff.
- We should view the library collections (ARL member libraries including the national libraries) as collectively making up the "national collections;" the national libraries cannot stand alone.
- There are other ARL libraries whose collections, as national resources, also make them de facto national libraries. Perhaps we should articulate this better and define their roles as well.
- On the LC Science and Technology initiative, we should stress that LC should not duplicate or replicate what already exists elsewhere but should link resources through networking.
- We may need to seek legislation that would make LC's de facto role as a national library more formal.

Document Delivery and Print-on-Demand

Driven by the combined factors of extremely high inflation in the publishing industry, increasing numbers of titles published, and shrinking purchasing power of budgets in libraries due to a series of soft-to-hard recessions in the educational sector, research libraries are moving from a model of "ownership" towards a model of "access to" information. The expected outcome will be increased usage of interlibrary loan and the development of a much stronger reliance on document delivery (FAX, electronic, and commercial suppliers) and publication on demand from electronic databases via high

speed laser printers. This will be facilitated by the development of campus networks, LAN's, the NREN, and sophisticated scholar workstations that can handle text and graphics.

The following discussion questions were posed to members at the forum: (a) How fast do we expect these developments to have an impact on our patterns of resource sharing and at what point will they influence our purchasing patterns? What will it take for libraries to alter the practice of acquiring current use and archival copies? (b) Such a model will put additional pressure on net lender libraries. How should that activity be financed? (c) Will ARL libraries assume additional responsibilities as net lenders in special subject areas, and if so, how will those responsibilities be defined and funded? (d) Will ARL libraries assume additional responsibilities in helping scholars create and/or manage electronic publications that are made available through scholarly networks rather than by for-profit publishers? How realistic is this? In what time frames?

Member discussion led to the following advice and observations:

- Payments for copyright and royalties need to be determined in a national context, not locally or regionally. Our response to questions of copyright for electronic document delivery should be "Let's get on with the job;" copyright law will follow.
- We need a strategy for North American collection-sharing that identifies library collections as "centers of excellence."
- We need alternative economic models of resource-sharing including the commercial sector role.
- ILL is an old design and very labor-intensive. We need to look at new delivery mechanisms and configurations to speed delivery and reduce costs. Use technology to create efficiencies as we design document delivery.
- Consider a national imaging project to build a national database of bit-mapped images. For current materials, these may be commercially supplied in order to recognize property rights.
- We need to educate our administrators about the costs of resource sharing as well as the savings.

Changing Ethics of Resource Sharing

Librarians have a professional ethic which supports access to information and resource sharing. That ethic has been the underpinning for the development of national library networks. However, the impact of inflation and recessions has forced libraries to be as cost-efficient at the local level as possible, thus encouraging use of systems or products which might save money locally in the short-term but which might also weaken the national infrastructure for resource sharing long-term. An example is the practice by a few libraries of downloading records from the bibliographic utilities into local systems and completing cataloging on the local system without paying for the use of the record and without adding its holding symbol to the national database. Another example is the use of state networks for interlibrary loan before using a national network. In both cases, the national network depends on the income from those transactions and the addition of holdings information to support other services. Loss of income or holdings may threaten national resource sharing.

Discussion questions for forum participants included the following: (a) What impact do ARL members forecast that regional or state networks or provincial networks will have on national resource sharing capabilities? (b) What is the obligation of ARL libraries to contribute their holdings to the

national databases? (c) Do our interlibrary loan practices support resource sharing, or do we follow practices which in fact limit cooperation? If so, why? (d) Do our charging mechanisms and/or financial underpinnings of ILL and document delivery need review in light of increased reliance on interlibrary loan and document delivery? (e) Do you concur that the ethics of resource sharing are changing? How? Why?

Member discussion (curtailed due to time limitation) led to the following observation:

- Ethical issues need to be addressed as we consider all models for resource sharing; this underscores the need to reconceptualize the value system for electronic resource-sharing.

Conceptualization of a Distributed National Library Network

Several years ago NAC issued a position statement that supported a natural evolution of a national information policy rather than a federally mandated national information policy or national information network. That implies the development of a distributed national library network and distributed responsibilities for information resources.

Discussion questions for members at the forum included:

(a) Do we know enough to conceptualize what such a distributed national library network would look like functionally? Can we conceptualize it to the level that it would help us see that the proper linkages and infrastructure are developed? Is there anything this committee should be doing to facilitate that process beyond what the Coalition for Networked Information is already doing? (b) Do we need to develop any protocols or hierarchy for filling requests in order to spread the loads on libraries? (c) How do we finance such a distributed network? (d) Is "natural evolution" a practical or realistic way of developing a national information policy? What role should ARL or this committee play in the development of national information policies?

Member discussion elicited the following generally held position:

- ARL directors continue to support the earlier NAC position that the national network should evolve in a distributed fashion.

FINAL PRIORITIES OF FORUM PARTICIPANTS

At the end of the membership forum, the chair of the committee asked those in attendance to identify priorities from the white paper that the ARL Committee on Access to Information Resources should address. The group ranked the following issues as the most important:

- Reconceptualize the values and principles that provide the underpinnings of electronic resource-sharing.

- Reconceptualize interlibrary loan and document delivery, employing technology to make it less labor-intensive and identifying cost models for alternative configurations and delivery mechanisms.

- Coordinate the various issues raised in the white paper with other ARL committees, as there is significant overlap on aspects of many of the issues.

MR. BILLINGS: It seems to me that networks are going to have to do what networks want to do. That's to say that I think we're going to have to depend on what we as ARL members want to do within our networks to make them behave, perform, produce, and cooperate, like we want them to. ARL, as an organization of institutions, should be in a position to reach some sort of consensus of shared values that we as an organization might espouse. And as individuals who in effect shape the networks, we should take those values back and back apply them to our network practices. It seems to me that there is a natural progression here which, in effect, says that ARL as an organization doesn't set out to define what's going to happen to the networks. Those of us who constitute the networks have to do that. But ARL as an organization ought to be able to reach some point of shared value. The value system ought to be developed and some common terms should be established.

MS. EATON: What I believe you're saying is that we need to go back to articulate some principles and apply those principles as our networking activities evolve in a variety of forms.

MR. BILLINGS: Yes. In effect, networks have to govern themselves, drive themselves, survive on their own merits.

MS. EATON: The particular reason this issue came out so strongly in our earlier discussions was that we were working on this paper at the time of the discussions between RLG and OCLC, and there was some concern for protection if we were to end up with one network with super power. There was a fairly strong concern running through the discussions when we wrote the paper. Clearly things have moved on and it did not transpire the way some predicted. But it doesn't mean that couldn't happen in some other ways.

MR. BILLINGS: Clearly one of the things that is going to happen is that we as librarians, others involved in computing, and other information providers, are going to have to cooperate in different ways in the future. Jim Michalko and I represent a personalized analogy here since, for many years, I have been a very strong advocate for OCLC services. While I've admired and publicly recognized a lot of RLG's programs for a number of technical reasons, I personally made a decision to use one network over another. Although this doesn't really have anything to do with OCLC and RLG per se, the image I was portraying was that of the old saying, "supping with the devil and using a long spoon." I'm convinced that we need to be supping more with a number of devils, and the long spoon, as it were, is electronics.

I think we've gotten into a position where the not-for-profit sector is too antagonistic and hostile toward the for-profit sector. I am convinced that we have to establish some new relationships and cooperative efforts to see us toward solving the present information crisis. We're past the point of cooperation of libraries with libraries only. It's quite clear, with respect to the Coalition for Networked Information, that suddenly we have a new model for cooperation involving EDUCOM, CAUSE, and ARL. So, in effect, we have three devils, who because of some common interests, have come together in a different collaborative way.

You can look at some of the other efforts underway involving OCLC's activities, Faxon, and Silver Platter and some of the things that RLG is getting involved with. It seems that there is a much closer relationship developing between the not-for-profit and the for-profit sector. We need to put more of these kinds of efforts together nationally and internationally; only then will a new collaborative model emerge.

MS. VON WAHLDE: Could I follow up on the supping analogy? Some of us are supping with one devil with a long spoon, and as Harold has suggested, there may be advantages in supping with several devils. At one point when there was some concern about OCLC-RLG discussions, I believe people within ARL may have asked if there was a role for ARL in it. I don't know that there necessarily is a role for ARL. But the question might be whether we tend to be polarized into distinctly different kinds of networks or approaches until we're doing more supping. Maybe ARL can serve as a forum in which we can overlap with one another on some of these issues. Because if network memberships remain distinctly divided, there is no mechanism to bring us together on some of these issues unless it is through the Coalition for Networked Information, and that may or may not be appropriate. Is there some way for ARL to see

that these kinds of issues are raised, whether it's through the Committee or through other means?

MS. AVRAM: I'd like to say why I think there's a Coalition. To me the reason we have a Coalition is because we're all in the same universe. EDUCOM is concerned with academic computing, and some of us were concerned with networking the libraries in one place using different standards but not even talking to each other. So that's the Coalition. Now that we've written the paper, a missing issue has been brought up, which is that there is something out there we're all trying to understand. It's called a new environment.

For the Network Advisory Committee (NAC) meeting I'm having Paul Peters define that new environment as a basis for those discussions. I bet that each one of us has a different idea about what this network is and what is going to be carried over it. For example, Nancy said that we're not going to be concerned with bibliographic control when she mentioned bibliographic data. I don't think that's right. We're not going to be concerned as much with bibliographic data, but you just can't take information and throw it all over the network. Somebody must know how to get at it.

MS. EATON: What I intended to say was that we were going beyond only that focus.

MR. WYATT: While ARL defines for its member institutions a certain common area of interest, we are already finding in the new forms of communication that we do have common interest areas—the bibliographic utilities and now with the kind of different groups we will interact with in the electronic environment—that are not necessarily contained within this group. There may be many that move well beyond it. At this point, I certainly cannot define what those common interest areas are; they're arising, and there will be many more. We will be dealing with a lot of different common interest areas beyond just ARL and RLG or OCLC. This is the environment in which we're going to work in the future—much broader issues than we've faced in the past. I would agree with Henriette. Based on that, the bibliographic format is important.

MS. WERNER: Can I just ask for a sense of the group here? As you've noted, we wrote this paper at a different time. Is this then an issue that we ought to set aside for the moment in terms of this Committee? Is this not the sense of this discussion? I've seen some heads shaking.

MR. WYATT: Yes.

MS. EATON: I'm hearing a slightly different interpretation, so let me test mine on you. The focus should be a much more diverse community of interests, looking at coalitions with ARL, and not worrying so much about the not-for-profit versus for-profit issue, but exploring the partnerships that should emerge. So that while this topic is pertinent, the focus of it should be different. Why don't we move on to the next items, since obviously they all tie together and are spin-offs from each other.

The next item, "Emergence of Concerns Beyond Bibliographic Data," has to do with what particular activities we might be focusing on as this Committee moves its focus to include more than bibliographic control. As Henriette Avram pointed out, we're not giving up that concern. Obviously the Coalition is very active in this area. So one of our basic questions is if this Committee needs to be doing any more than the Coalition is doing. Are there things that go beyond the Coalition's activities that we should be focusing on?

MS. TAYLOR: One of the important roles of the librarians involved in CNI is to continue to bring forward concerns that may not occur to the technical people. And the example Henriette gave is a good one, pointing out why it is necessary to be concerned about character sets. What the Committee should be doing I'm not sure, but there are still issues out there that may not be fully understood. Until we've been responsible for providing access to huge amounts of information, the Committee has a role to play.

MS. EATON: In other words, we should look at the things that are not being covered and try to suggest additional items for the Coalition to consider?

MS. TAYLOR: Yes, in the sense that when you hear a discussion or great excitement about what will be available on the network, the excitement tends to supersede the infrastructure that must exist if people are going to find anything. I experienced this at Brown University with our own network where, in the early days, they were talking about how individual faculty would build their own databases and then everyone on the campus would have access to them. It was the librarians who had to ask if they were going to try to standardize how they built these databases. How are people going to get anything back out of them if everyone's using a different set of rules and structures? That had not occurred to the people involved, not because they

were stupid, but because they just hadn't had our experience in getting information back out of the system that we created.

MS. EATON: The first question is one that we were particularly interested in as a committee: how do you see access to local holdings as we move into document delivery and the need to be able to identify things at a chapter or item level more easily than we can now. The Z39.50 standard is one option of locating holdings. The national databases are another option. Linking our holdings to indexing/abstracting databases is a third option. It may be that all of those things are important, or it may be that there is a preference for the direction that we will take in terms of how we use our resources. We're interested in some discussion about that item.

PARTICIPANT: One wants to be sure that the user can find what she or he needs—that is the question. If it can be done through linkages so the central database does not have to become too large, complex or clustered to operate efficiently, terrific. It would be better if the Z39.50 or its replacements could enable us to have a layered method so that those who wanted simple, quick access without detailed holdings information could quickly do that. If they did discover the local item detailed description, there would be a routing mechanism for moving beyond that . Some combination then would be what we would be after. But I think we should emphasize the routing mechanisms because of the greater efficiency and probably lower costs.

MS. EATON: Would most people agree with that as a strategy? I'm seeing lots of yesses.

PARTICIPANT: What were the assumptions of the Committee about how or why this article/chapter-level information would be created or revived in the local systems?

MS. EATON: Most of us are creating that information as part of our own internal automated systems. If you put it into a national database, it's an additional step or effort, totally apart from the question of how large a database can be before it becomes cumbersome.

MR. WYATT: There would be an assumption though that many institutions would be simultaneously creating the same information in the local systems.

MS. EATON: Most of us are already doing that.

MS. TAYLOR: I think I would ask that question, though, because I'm not sure I would say that we're all doing that. I think people might like to do that.

MS. EATON: Let's pose the question a different way. Most of us do have local systems. If, in adding local holdings at the item or chapter level, which methodology would you prefer in terms of efficiency?

MR. BISHOP: Don't you have to separate the mechanical question from the logical question? You want to get at the information. Now, the technique that you use to do it may be different today than it is in five years. The important thing is that it is a capability that we really need to have if we're going to be able to do that kind of resource sharing.

MS. EATON: So you want the option?

MR. BISHOP: Yes. I'm not sure that you can make an intelligent choice at this point.

MS. AVRAM: I don't think that's right. I think it does matter. In fact, I believe that that is one format that has been initiated as a way of doing that. Even if it's not the final way, at least in doing it, that information does go into one composite database. It will all be the same way, not many different ways.

MR. KOBULNICKY: I'm a little disturbed by this discussion. I'm getting the sense that somehow there are some philosophical underpinnings that are missing here, and that we're talking about a step too far in how we do things as opposed to defining some fundamental values that are missing in these discussions. And I think we're trying to get at the values by asking if we should be doing this or that, rather than posing the real questions of what the values are. I look at this question, and it really is a question of what the value of detailed level information is. There's an economic question there, but there's also a philosophical question of how far our responsibility goes in providing information that I don't think we've discussed. I could probably go through all of these and say there is some question missing that we haven't talked about. I don't know whether I'm just doing that or whether others are.

MS. EATON: Well, that's why we're having this discussion, because we're not sure we've posed all the questions. We gave examples of the kinds of questions that came up in our discussions. We're asking for your help in posing any missing

questions. If you're not able to formulate those here today, we would also encourage you to follow up in writing.

MR. CAMPBELL: Some of these issues are related to the kind of value-added work that libraries have been performing for a long time. This is a good juncture to ask the publishers to provide some of this information. That's especially possible as they move more toward electronic publishing and allow us to get out of the business of doing this value-added work. The ability to maintain and support the costs today will continue to decrease as the amount of information increases. And I think the publishers would be receptive to do it right away.

MS. SHIRLEY BAKER: So our role would be to outline what that information should look like so that we could use it in our systems and to encourage its provision.

MR. CAMPBELL: The publishers and authors are the perfect people to do authority work, and they know what the names are and so on and so forth. We should design a strategy and move that out to the point of the creation of the item.

MS. WERNER: This next item here, "Evolution of Information Delivery Mechanisms," is a major philosophical issue. If we were in agreement that the national bibliographic records were really summary holdings of information, and it is in our local systems that we maintain local holdings, then if we could come to some conceptual philosophical understanding of that condition, we'd get ourselves out of a lot of trouble we seem to be in about where data is supposed to reside. I would like to know if this group feels a strong consensus about that issue, or is it one we need to work through in some different way?

MS. HOFFMANN: It needs to be worked through a little more. This particular question has confused us by putting together the item-level information and the chapter-article-level information in the same question. They are two very important questions and we've gotten tangled up in them.

MS. WERNER: Good point. If you've got the chapter information, would this group feel, in general, that the split of information and utilities for title information and item-level information in our local systems using Z39.50 or some other way of getting to this local data is the direction we're heading in? Or is that not the commonly held view?

MS. HOFFMANN: But that's what we haven't talked about

MR. MILLER: You need to take the chapter-article-level information out that doesn't really belong in the national record and just deal with item-specific information.

MR. KOBULNICKY: We're serious about finding many mechanisms to be satisfactory.

MS. TAYLOR: Yes. The only caveat I would add is that it did not interfere with someone literally being able to identify whether the item was indeed what they wanted to receive. I wouldn't want to see us make the same mistake we've made in general with cataloging where we try to treat every single field with the same high level of cataloging. But sometimes that might be appropriate. There might be areas where a lot more detail is needed at the national level, otherwise the scholar wouldn't be sure that that was what he or she was seeking. But that would be the minority of instances rather than the majority.

MS. EATON: What I'm understanding you to say is that we should be careful with what we're putting in the bibliographic record versus the item record if it's something that the scholar needs to make a decision about before going down to the item level, where many of us have options for where we put some of that information. If we have national databases that reflect our serials with certain holding statements and our monographs in general (not how many copies we have and what locations are on campuses), then a scholar looking for a chapter in a book will be able to know in general where the books are, and a person looking for an article in a serial will have the same information. The question is if that is the appropriate way to get to item information or if Z39.50 is the right way to do it.

Why don't we move on to the issues surrounding the network—the telecommunications options themselves. One of the questions that continues to be asked and that we discussed as a Committee was whether, given that we have been using dedicated networks, there are things that are still appropriate to do on the dedicated networks, such as cataloging, or whether NREN should, in fact, supersede some of the private networks. That is one of the issues we talked about at some length, and we've posed some additional questions here. We're asking if you have any feel for that.

MR. KOBULNICKY: This is the kind of question like "how many libraries should we have on our campus." One of the answers is that it would

depend on the funding sources and the interests of the players. So whether or not there will be a single NREN or whether there will be private dedicated networks is not an either/or question, it involves both options; and as the different functional needs and their funding sources work themselves out, it will be determined. We want to be sure that, to the degree possible, NREN will act as the linking channel or mechanism between them, and that we're provided with adequate mechanisms for negotiating and finding our way through the structure that will evolve. So, again, it's in the way of assuring the protocols and the connections rather than the one single mechanism. We want to be sure there are those linking mechanisms, that they are realistic, that they are effective, and that they are useful.

MS. EATON: Is that a fair summary of everybody's opinion? We can move along to "Challenges and Threats of Local/Regional Networks." This item is included here to stimulate discussion. It's also one that we have a hard time as a Committee dealing with because we're not sure how big a problem it really is. There is no real reflection of Committee opinion on this. It is the local regional network issues as they affect the bibliographic utilities.

MR. BILLINGS: It seems like this is going to be a result of the marketplace so to speak. It's going to be a result of the emerging technologies. Of course, it's based on services demanded, technology available and competing marketplaces. I'm not sure that I can see precisely what ARL as an organization might do or what its role as an organization might have in that kind of situation.

MR. KOBULNICKY: Here's where I come back to my statement about philosophy. It seems to me that one of the things that we can do is work on a way of saying that the effect of local regional networks should not be to undermine national utilities or national databases. As a statement of purpose, that seems reasonably appropriate. How it works is dependent upon economies and other sorts of things, but it has to at least be a goal. In some way there's got to be a sense of a standard, or if we're talking about networking and linkages, some "home." And I use the home in the hypertext, as a place where one thing can begin and networking can move from there.

MS. AVRAM: I think managers would like a site for them, according to the document that I gave the Committee. The point is that local shared systems are already the national database, and I'm not sure what we're going to do. But there is an impact. There was a 1980 NAC meeting published on this. I gave the article to the Committee. Recently we asked Lou Wetherbee to give us a report on the impact of the national local shared systems on the national database. She did a good job, and it's worth reading. It will be published in the next NAC planning paper.

MS. EATON: In reading that paper, there was a very natural set of conclusions that feed into the last item on our agenda, which is the evolving distributed network. I would suggest that when it comes out, that you read that paper. What we have is an early version of it.

MR. WILLIAMS: Could you summarize the paper? That sort of leaves us hanging.

MS. NANCY EATON: The paper was commissioned by the Network Advisory Committee. It was done by Louella Wetherbee and surveys the activities of regional and local networks and tries to forecast some of the impact and how it might evolve. The other Committee members can help me on this. My interpretation of the major conclusion of it is that we are evolving into a distributed network. Most of the questions posed by the paper address how we can do that and what the political implications and operational implications of that are. Would anybody like to add to that?

MS. VON WAHLDE: I think that's a good assessment, but I would encourage people to purchase it and read it. What strikes me is that it still relates to some of Paul's concerns. That is, these local, regional, and state, networks are evolving, and there is a series of complex interrelationships. People are making decisions all the time about where they're putting their data, where they're getting their data, and how they move within other areas.

And before we know it, we will have done things that we're unaware of and the implications aren't readily apparent. One of the approaches is to be sure that this is clear when we are involved in CNI-related activities, because in New York as one example, we have a university network and we have a state network. Some of these things connect to the Internet. We are trying to create a university center catalog network as well, and all these things are going like tops. It's very hard to determine where to put your energies. The decision that you make today may not be the right decision five years from now. But it's too complex and perhaps unclear to figure this out. We need to stay in touch with as well as understand the philosophical and economic realities that influence some of our decisions.

MR. KOBULNICKY: Just to come back a little bit. I find it very interesting that we are so supportive of the NREN not knowing how it's going to be funded. We have a nice delivery mechanism all set up, but we're not equally concerned about the maintenance of a convenient national database. By convenient I mean that it's all well and good to network between regional local systems, but it's a lot easier if we set up standards and have a national database for things to build off of that. I just find it interesting that we're concerned about the delivery mechanism and not about foundations and talk about infrastructure.

MS. WERNER: I think another concern is that there's talk about people doing cataloging—I'm talking about ARL institutions—off local systems or regional systems, and to heck with giving our records to the major utilities so everyone around the country can see them. I have no direct knowledge of whether anyone's doing that to an appreciable extent. If you talk philosophy, if this group were to come together and reaffirm in some way that we have an obligation to make our holdings known to the national community through one of the bibliographic utilities, that would be important. I'm a little concerned that paranoia can develop about this topic within the utilities themselves and a potential shutdown of records sharing could occur.

MS. BUTLER: I'd go a step further and say that maybe it's made a condition of membership in an organization like this, because we're talking about values here, not about practice.

MR. MILLER: Would you say that the cost of using the utilities was such that the price of membership caused you to have backlogs which were known to no one?

MS. BUTLER: That's a very general question. I think the value is significant enough that if you wish to participate in an organization called the Association of Research Libraries and benefit from that collective action, then you must also pay the price of it in the shared values. I don't think you should pay an inordinate price, but I think collectively we can share the costs.

MR. KOBULNICKY: The other response to that question is that this backlog is not going to go away because we don't pay that price. There are backlogs anyway. We all have backlogs that we live with. The question is how much backlog do we tolerate?

MS. MARTIN: If we determine that the value is to make our individual holdings known, then could this committee work not on whether bibliographic utilities should encourage local holdings, but instead to figure out a way to accommodate options? Can the Committee look at options so that it wouldn't necessarily be a major cost implication? Options based on a commonly held value, on some principles, and looking at both the maintenance of the utilities and at the impact of a network and information sharing—things are moving so rapidly that we can't necessarily speak only to one option.

MS. EATON: Let's move on to the topic of the national libraries and their roles. I might add that Jo Harrar from the University of Maryland will be representing ARL at the NAC meeting, which will address the roles of the national libraries. We have promised to give her feedback from this discussion to take to that meeting.

MR. BILLINGS: Clearly the national libraries are as perplexed about how to survive and what to do given their fiscal circumstances as much as local networks, local institutions or any of our organizations. It's clear that one could run through this list of the national libraries and look at problems that are facing them and problems that face us because of the kind of answers that those libraries are having to develop in response to the kind of problems that are afflicting them.

In effect what we have again is that a balance has to be worked out where our common value system, that is the directions all of us would like to take, has to be looked at in the face of the very serious consequences of the particular circumstances afflicting and conflicting with the national libraries just as they affect the rest of us or any of our other organizations. It's a very difficult problem.

MS. EATON: Let me just pass on something from last night's function at Howard University. Many of us had the opportunity to meet Mr. Ellis from the Library of Congress, who has been given a year to determine what else LC should be doing with science and technology. It seems that that's a critical debate that we should be involved with as part of this discussion. What advice would this group give in terms of that discussion? How should the Library of Congress proceed in the area of science and technology as they work with ARL libraries, for instance?

MS. BAKER: I'd advise them not to duplicate existing resources, but to try to link them. Identify them, get information out, make access to them

available.

MS. EATON: Any other wisdom? I think we really are projecting in this area and clearly we're trying to suggest only what the working relationships might be between the Library of Congress and other members of ARL. Is this an area that this Committee should be working on?

MS. TAYLOR: Whether they would have volunteered for it or not, the national libraries do have a certain leadership role to play. And part of that involves a dialogue with groups like ARL. The second thing is that if you look at the combined collections among ARL libraries, there is a remarkable research resource that should not be overlooked in the plans that the national libraries make for their own services and constituency. They should see themselves as part of this larger world of information resources, not as stand-alone enterprises that have to duplicate or reinvent certain things.

MR. WYATT: I realize that the panel is probably defining the national libraries. There are directors or representatives of several national libraries. Several of our institutions in ARL, besides the ones listed here, are actually national libraries. We've got one sitting right there on the panel, that is a real national library. And I wonder if ARL might help define the role of the national libraries that are in your paper here. Could ARL facilitate a kind of meeting or coordination among some of those very large institutions within ARL that are national resources for national libraries in a somewhat different sense from the Library of Congress? Within that group, the national governmental libraries might be able to gain some information on the roles that they are playing and of the role that the group might play nationally from those directors or representatives of those libraries.

MS. VON WAHLDE: That is an interesting point, and I think it's well taken, because one of the issues that we talked about on our agenda, that's not part of the paper, is how some of the largest libraries with cataloging needs, especially in terms of foreign language material, try to solve some of their problems. Some of the largest ARL libraries and national libraries are more likely to be independent in terms of their problems. The second point is that it's very important that we stay in touch with everything that is going on in terms of changing direction or policy within the national libraries. We need to be consulted with adequate time to offer advice and suggestions; those dialogues need to be ongoing. The Committee is one mechanism, but it may not be the only one.

MR. WILLIS: Just one other thing on Jim's suggestion. I hope he includes national libraries in our hemisphere and not just libraries within the contiguous states.

MR. WYATT: Absolutely.

MS. EATON: We have two other areas that we need to focus on quickly, and then I would like to come back to the issue of which of these areas should be highest on the Committee's priority list. These last two issues we have talked about a bit: what happens to the major libraries in term of document delivery as we move into this arena; and the implications of distributed networking and some of the ethical values and concerns we should have as we do that. Are there any additional comments specific to the issue of document delivery and our ability to support that in the national libraries, as we have more and more demands placed upon our collections for document delivery? Any suggestions about how to proceed in this area? Or is this an area that the Committee should be focusing on?

MR. KOBULNICKY: This is an area in which there is the question of local economies. I think that we all look at these activities and look at what it costs us and try to recoup that cost by whatever means we have available to us. Do we go beyond that nationally? I think that's very difficult to do given the individual circumstances that we're all dealing with.

MS. EATON: One of our concerns is that we have seen, at least in some institutions, is that they simply cannot cope with the volume of requests already coming in. They're being more restrictive. And yet the whole assumption of access to information is that somebody's out there to deliver it. That's really the concern that we're expressing in this area.

MR. MILLER: There are really two different issues here. One is the traditional kind of interlibrary sharing. And the other, print on demand, may involve a library and non-library agency. They're very different economic models. One of the things that's not here that would be very useful is some alternative economic models of interlibrary resource sharing to help us make some of those decisions. If we just look at costs, we'll stop tomorrow. But there are obviously some benefits and we need some models in the area.

MS. EATON: That's also coming from the Coalition.

MS. EUSTER: In the OMS Quick Spec survey about what keeps you awake at night, directors ranked financial resources as their number one concern, and within that the number one concern was what we can do to make cooperative resource sharing endeavors more cost-effective. There's an express need. It is the mechanism that is the difficult work, that is good work for the Committee.

MS. EATON: And that would go along with the economic modeling?

MR. BILLINGS: There seems to be a real paradox or irony involved these days. As we talk about what we can do more of and better with the new technologies for information sharing, we still tend to talk about ILL in terms of what is a very manual and labor intensive process. We continue to talk about what really promulgates the labor intensive cost of a sharing process, which we really need to redirect. We need a national imaging project that will help develop distributed file servers and digitized and converted images, so that we can get away from this labor intensive manual operation that's going to continue to eat us alive in terms of staff costs, and that's dependent upon old-fashioned delivery mechanisms. We simply have to take advantage of the new technologies, develop a national imaging system, and move on with what's so transparently available to help us in this situation.

MR. CAMPBELL: There's also the longstanding question of who's going to have something to share. We've got to find a collection strategy if we're going to depend upon one another for different items. And as far as I can tell, we still don't have that kind of strategy in place.

MR. MOSHER: I'd like to second the call for ARL's decisive leadership in rethinking our library costs, to speed delivery to users while reducing the cost, time and effective process that by now is (while we all love it) very old and no longer efficient. I don't know whether imaging is dead or what its role is, but I think ARL can take an important leadership role in that.

MS. EATON: So should the Committee be looking both at the design, using the technology or the system, and the economic modeling for various alternatives?

MS. TAYLOR: It would also be helpful for ARL, in terms of that economic model, if it came up with ways that we could communicate to our administrations that resource sharing and access have their own set of costs. There are two simple assumptions made on a lot of our campuses that this is the answer to not having to put so much money into the library. We're not going to be putting as much money into serials. Once we get everything into the computer, all will be well. And there are so many flaws in that assumption that one almost doesn't know where to begin. If you look at the present methods of resource sharing, they're so labor intensive that the cost of lending and borrowing is just astronomical.

MR. MOSHER: We need some better cost modeling on exactly that issue. That's another thing that ARL could help us to provide.

MS. BUTLER: This goes back to the role of the national libraries. We need active partnerships among the national libraries and research libraries in this hemisphere to underscore your point. To begin creating these digitized libraries, are we all going to be sitting in our own libraries providing electronic access to some piece of our collections at enormous costs, or should we begin to really plan those kinds of responsibilities for our retrospective collections and begin costing out those kinds of activities?

MR. MILLER: One of the difficult things here is that in terms of trying to do it electronically, the high use material that's traveling back and forth across the country tends to be the more current material. That's where it would be cost-effective to get it digitized. That's where there are real intellectual property and copyright issues. It's well worth pursuing, and it may turn out to be a commercial product that libraries will be presented with. It offers some real opportunities. The stuff that doesn't get used very much, that a scholar uses once every five to ten years, brings up a real question about the the cost-effectiveness of concentrating on that kind of material.

MR. BILLINGS: Too many of us sometimes get scared by the words "copyright" and "intellectual property." We need to pay for that and go on.

MS. BUTLER: The payment is a real question. It has to be determined in some sort of national system, not local or regional. It's not set by the public per item.

MS. PARENT: That's fine if you want to pay for something, but you have to know who to pay. And

sometimes with electronic publishing, you really don't know who the body is controlling the information.

There is an international project called GEDI (Group on Electronic Document Interchange) going on right now under the auspices of Pica in the Netherlands that OCLC and RLG are members of, I believe, along with several other countries. Their response to the copyright issue for electronic document delivery is, "get on with the job. Let's do the electronic document delivery and copyright law will follow afterwards. We'll take it to court if we have to, but we've got to get moving on this."

MS. EATON: In the interest of time, we've actually talked quite a lot about the ethics issue and you've given some good advice on having alternatives and starting from the basis of some values. So let's turn to the last item—whether you continue to share the NAC recommendation of an evolving network. Should the Committee be doing anything in addition to what's already taking place? We have touched on this quite a lot. Any further comments?

The problem for the Committee is to see how we can best distribute our time across all of these issues. What would be your advice on priorities? Are there any of these that stand out as things that we should work on as first priorities as opposed to second priorities? And some of that may have to do with timing. Some things may be more critical now than later.

MR. CAMPBELL: After hearing the conversations today, the more practical place to begin work priority-wise is document delivery.

MS. EATON: Is that a general consensus? That, in fact, cuts across many of the other items.

MS. MARTIN: That has to be preceded with some kind of stance or, as Paul said, shared values on whether we, in fact, do make the holdings information known at the national level or have it in a linked fashion.

MS. SHIRLEY BAKER: The first focus should be identifying the philosophy under which we're operating. And the second should be looking at document delivery in light of that philosophy.

MR. SIMPSON: I agree. We should pursue the technology. And also start identifying centers of excellence. I've heard about the national library responsibility, but if we are indeed migrating from ownership to access, then we have to have some national planning in place whereby we know who actually owns the materials. It's going to be interesting as we're basing our operations and collection development operations on access to other collections, if there's nothing systematically in place that will provide the knowledge of who actually is building the center of excellence in a particular group. And that's critical. I realize that's perhaps not the charge of this Committee, but it's a responsibility we need to address.

MS. EATON: There is a piece of that that is under discussion by the Committee. There is a subcommittee working on possible cooperative cataloging projects. What was said yesterday is that we need to bring our collection development people into that discussion because the two can't necessarily be separated. I think it's getting at your point. So that is on our agenda and it has an active subcommittee working on it. Other priorities?

MS. BAKER: Just a comment on the centers of excellence concept. There's a problem with us as academic institutions, because theoretically we need to reflect what our university is doing. I used to think, before I was a director, that they must know what they're doing and have a plan, but I've discovered that it's much more accidental and ad hoc. I have a hard time figuring out how I can climb when they can't.

MS. EATON: Well, the sense I have of the group is that we should probably simultaneously work on the technologies of document deilivery, which, in fact, bring in many of these other elements and the value system that should be the underpinnings of many of these other discussions as our first two priorities. Is that a fair assumption?

MR. MILLER: I would just suggest that we take care to avoid the value system being too technology specific. Because it may be that in ten or fifteen years, a single national bibliographic database may become irrelevant.

MS. EATON: I'm assuming the values are independent of the solutions, but that they would guide the solutions.

MS. EUSTER: I have a similar concern that cost models not be entirely technology driven. Obviously they're informed by technology but that's not the only real cost of document delivery right now.

MS. EATON: Thank you. This has been a good discussion. I think it's given us some direction. We will be meeting this afternoon to pull together a

summary of this and we'll try to get that out to the membership. If you have other thoughts, give them to us in writing, please.

SCHOLARLY COMMUNICATION

Paul Gherman
Virginia Polytechnic Institute and State University

MR. GHERMAN: There are obviously many things one could talk about when discussing the power of communication. We have tried to narrow it down to two issues that we hope will stimulate ideas among you.

We will start with Richard De Bacher, who has attended a number of ARL meetings on behalf of AAUP. Ann Okerson and I were welcomed, along with several others, to the AAUP meeting in Naples, Florida in June, and we decided it would be nice to have Richard address us, since we addressed them at their meeting. Richard De Bacher is the Associate Director and Editorial Director of the Southern Illinois University Press. Prior to assuming that position in 1989, he held various marketing, editorial, and general management positions in Morris Press, the American Western Issue, and the University of Chicago Press. He is currently serving his second term as the Chair of the Library Committee for AAUP, and he is going to talk about relationships between presses and, hopefully, the ARL.

Our next speaker is Michael Gannon, Director of Engineering Information, Inc., a not-for-profit company that publishes engineering indexes. As Director of Document and Distribution Services, his responsibilities include the state licensing of index and document delivery services.

"UNIVERSITY PRESSES AND ARL LIBRARIES: PARTNERSHIPS AND COLLABORATIONS"

Richard DeBacher
Southern Illinois University Press

MR. DE BACHER: Thank you, Paul. It's a pleasure to be with you again. This is the fourth ARL membership meeting I've attended since returning to university press publishing in 1989. At that time I was delighted to find that the Association of American University Presses had established a committee on library relations. Having spent almost a decade in library publishing at Oryx Press and at ALA, I quickly volunteered to serve on this committee, and, just weeks after beginning at SIU, I was off to Washington to my first ARL meeting.

To be frank, I must say that university presses have developed this concern about their relationship with libraries only recently. When I began my career at the University of Chicago Press in 1970, there was no library relations committee at AAUP. Research Libraries and academic libraries were rather taken for granted. Their budgets throughout the 1960s had been generously supported by various levels of government, and this abundant flow of cash found its way to university presses and other publishers in the form of blanket orders for our new books and subscriptions to our serial publications.

By the early '70s, however, the federal support of library budgets was diminishing under the Nixon administration. Libraries began to be more selective in their acquisitions and their orders for university press publications diminished. University presses, however, continued to print books in the numbers to which they had become accustomed. In 1970 first printings of scholarly monographs often ran as high as 1,500, 2,000, 2,500, even 3,000 copies. We were accustomed to shipping 500, 600, or 700 copies on receipt of stock — most of these being standing orders from libraries. And, predictably, by the mid-'70s university presses began having warehouse clearance sales to deplete the inventories of unsold books that had accumulated largely as a result of a "soft" library market— a softening university presses could have, and should have foreseen, had they been effectively communicating with their colleagues in the world of scholarly communication — academic and research librarians.

Thereafter ensued a vicious cycle in which the presses, in response to the "soft" market, cut back their initial print runs, leaving fewer copies over which to spread their fixed costs. At the same time they saved little in paper, printing, and binding as inflation drove these costs higher. The prices of scholarly publications necessarily rose; sales, predictably, softened further, and unsold inventories continued to fill publishers' warehouses rather than library shelves. Today, university presses often publish books with first printings well under 1,000 copies. They may sell fewer than 350 copies the first year after publication, of which perhaps half find their way to libraries, most of them the larger research libraries. We still haven't broken the cycle of tight budgets, slow sales, lower print runs, higher list prices, and, all too often, unsold books in warehouses.

It is difficult for us to know precisely how many of our books are sold to research and other academic libraries since so many of your orders come to us through the same wholesalers who serve bookstores. Just the same, it's clear that the number of books sold to libraries as a whole has dropped dramatically over the past 20 years that I've been in the business.

It may surprise you to learn that some of my university press colleagues still aren't terribly concerned about their diminishing sales to libraries. At the most recent AAUP meeting in June, I talked with a friend who also began her career at the University of Chicago Press just weeks after I did. She's now the editor-in-chief at a good university press, and Iwrongly assumed that she would share my interest in developments in the library world. She shrugged off my alarm, saying that library sales amounted to only 200 or so copies of the books they published, so they aimed their books and their sales efforts at other markets. And it's true that a number of university presses have responded to the vicious cycle syndrome by publishing more regional books, more trade books, and more books that have not traditionally been a part of university press publishing programs including cookbooks, fiction, and other items found in the catalogs of commercial publishers.

Still, it seems to me that something is wrong in the world of scholarly communication when the activities of university presses and those of academic and research libraries aren't perceived to be intimately linked. I'm equally dismayed to read articles by those librarians who envision a system of scholarly communication that circumvents publishers altogether.

Let's face it, the same technology (computers and telecommunications networks) poses threats to the traditional roles played by publishers *and*

librarians. Computers linked to networks have blurred the lines that once clearly demarcated the activities of the author/researcher, the library, the publisher, and the reader. Now, using a single machine linked to the right networks, a writer can conduct research, collect and sort information, write an article or book, edit it to adhere to a variety of stylistic formats automatically, set it in "type," and print it or publish it electronically whereby he or she can receive near instantaneous feedback from readers. Who needs a publisher or a library in such a world?

Research and other academic libraries are more likely than university presses to thrive in the new electronic environment because you have embraced the new technology. Happily, some among you, such as Ann Okerson and Duane Webster, have reached out to scholarly and university press publishers and invited us to join you in finding solutions to problems rather than remaining part of the problem. A growing number of university press officials are responding to the invitation. Generally, my colleagues in the journals departments of university presses — who often feel like second-class citizens among the far greater number of book people who comprise our rather traditional world — have been responsive to the crisis. They forged links with the library world through associations such as the Society for Scholarly Publishing (SSP) that have welcomed librarians among their membership. Upon becoming Chair of the AAUP Library Relations Committee, I suggested that our association consider ways to include more librarians in our activities and annual and regional meetings.

Much more can and should be done to improve understanding between research librarians and university presses. You've asked me and David Bartlett, the current AAUP President, to speak at this meeting. Ann Okerson, Paul Gherman, and Michael Keller (head of collection development at Yale) spoke at our meeting this past June. This dialogue needs to continue, to deepen, to expand, and to lead to tangible programs. Some of you have proposed a joint meeting of the 100 or so university press directors with you. Frankly, I'm not sure we're ready for that. I recall with concern a reaction I heard at the 1990 AAUP meeting in Philadelphia after a good session in which Jerome Yavarkovsky and Duane Webster spoke eloquently about the ways information networks will transform scholarly communication. As delegates left the hall, I overhead the director of one important university press mutter to a colleague, "Yeah, they said the same things about microfiche twenty years ago."

There are a growing number of press directors who are aware that we're missing the boat if we don't respond soon to the revolutionary developments. One such director, Paul Zimmer of the University of Iowa Press, has been very supportive of our Committee's work. He and the directors of other Big Ten University Presses plan to meet with their library director counterparts. I see such meetings as the next appropriate step in our expanding dialogue — meetings of manageable size of press and library directors from a region who can plan programs of cooperative ventures on a regional scale.

The AAUP Journals Committee, now headed by Janet Fisher of M.I.T. Press, is exploring ways to offer electronic counterparts to our printed journals. Janet and I are part of a task force charged with organizing a two-day workshop on electronic publishing prior to our annual meeting in Chicago in June of next year. We will welcome your support and expertise in developing our workshop, in identifying appropriate speakers and in selecting good course materials.

Library and university press directors can and must work together to encourage university-based publishing and to regain ownership and control of scholarly output. Again, you've been far ahead of your university press counterparts in this effort. But I know of at least one university press director, Matt Hodgson of the University of North Carolina Press, who is ready to take bold moves on his own to support your efforts. Matt plans to appeal to Congress and to the major foundations for money to support university press journal counterparts to the high-priced foreign-owned STM journals that have plundered your budgets. Such journals should be launched simultaneously in print and electronic versions through joint efforts of university presses and university libraries.

University press book lists are replete with major resources, the value of which will multiply when they're republished in electronic form. At SIU Press we're close to completing the publication of the complete works of John Dewey in more than thirty volumes. The last volume, of course, will be the complete index. But even the best print index cannot offer the kind of powerful access to Dewey's works that could be offered by a well-formatted version of the complete works on CD-ROM or on a searchable online database version.

We've been approached by a commercial vendor who wants to do that — put the complete Dewey on CD-ROM. But why should we accept a small royalty from a commercial firm that will take the work that took decades to edit at the Dewey Center at SIU and resell it to universities at a price that will accommodate that firm's profit margins? There's no reason why the combined expertise of

SIU Press, the Dewey Center, the SIU Computer Center and that of Morris Library can't publish an electronic version of the complete works of John Dewey and make it available to scholars at a reasonable price and in a way that directs the sales revenues back to the institution which produced the work in the first place.

Also at SIU, the papers of Ulysses S. Grant have been edited for publication at the Grant Center in Morris Library, and the results of that effort now comprise eighteen volumes. Many more volumes will appear before this massive effort is complete. Now is the time to plan for an electronic edition of these meticulously edited papers.

Similar definitive scholarly editions of presidential papers, of the works of great writers and philosophers, and other significant resources published by university presses can and will be republished in electronic editions, affording scholars powerful new access to these works. These books were edited at universities, published by universities, and bought almost exclusively by university and research libraries. It would be a major mistake to permit organizations outside the academy to profit from their republication in electronic form. Working together, university presses and university libraries can ensure that the fruits of their efforts will multiply in value in a new electronic environment. But we must act together — decisively and soon — to protect the resources that are our collective heritage and to protect the future ownership of scholarly endeavor. I look forward to working with you toward that end.

"TECHNOLOGICALLY - ENHANCED ARTICLE AND DOCUMENT DELIVERY SYSTEMS: NEW SERVICES AND THEIR EFFECTS ON RESEARCH LIBRARIES"

Michael Gannon
Engineering Information, Inc.

MR. GANNON: I would like to thank Ann Okerson for inviting me to address this group. It is at times like this when I feel I should open up by using the words of the American Express. Do you know me? I'm the Director of Distribution Services for the world's oldest company that indexes abstracts of engineering literature.

In large part, the Engineering Information company has been somewhat invisible, with regard to document delivery. I would like to open my remarks with some background about the company, how we ended up in the document delivery business, and what our concept of a document delivery business is for the future.

Engineering Information (EI) is a non-profit company established in 1984 when the first *Engineering Index* was published. Our products include the *Engineering Index* and the *Compendex*, the electronic version of the *Engineering Index*. We are located in New York City in the UET building, which houses some of the largest engineering societies as well as the Engineering Societies' Library (ESL). For many years, we have had a bit of an identity crisis. Some of our customers were confused about the relationship between Engineering Information and the Engineering Society's Library. There is no direct relationship. There is no association. We are not part of the ESL, nor are they part of us. Prior to 1991 we did have a situation where some of the publications from which we created the *Index* were acquired jointly with the ESL. Subsequent to their abstracting, cataloging, and indexing, we deposited those materials with the Engineering Society's library.

In 1987, we began a document delivery service primarily in response to the urging of IBM Corporation. Under that agreement, we began to deliver several hundred thousand articles a year. The materials that we used to supply those documents were, in fact, on the shelves of the Engineering Society's Library. Because they, too, were in the document delivery business, there were instances in which we were searching for the same articles at the same time. We were not able to resolve this contention, and as a result we no longer jointly acquire materials. Engineering Information, Inc. now acquires all of its materials and maintains them on our own shelves. This acquisition policy has significant implications for document delivery. We are acquiring 3,000 titles a year. We don't index all of the articles from those titles, but nonetheless they are available for document delivery. We have determined that in order to be in the document delivery business, we need to be high-tech. We've decided that the future of document delivery will be dictated by our ability to deliver documents electronically, and to that extent we have developed a document imaging and scanning system that will allow us to scan and store documents on optical disks. They will be retrieved from the disks to be printed and delivered through the mail or sent directly by FAX machine. We are developing software that will allow us to deliver an article through the Internet to a customer with an Internet address. This investment in technology would not necessarily be one that we would undertake, because it is somewhat costly, unless we had obtained the rights to scan and store these materials. We have decided, contrary to those who were publishing full texts on CD ROMs and selling them as subscriptions, that document delivery can best be served by an on-demand service.

Because we depend a great deal on the primary publishers, we walk a very thin line between being able to deliver inexpensive individual documents and annoying those people who contribute their materials to us to be abstracted and indexed. We have decided to go to the publisher and ask for permission to scan and store their publications. We entered a partnership with the publisher. This partnership takes on various forms, depending on the society or publisher we are dealing with. We have been successful in obtaining the rights to store the contents of journals and conference papers from three publishers, one of which is a commercial publisher, two of which are societies. We have signed the agreement, but we have agreed to jointly announce them at a date in the future, so I won't reveal the names of these publishers. But in the engineering community, they are substantial. We have also been denied permission to scan and store articles by people I will mention, like the Institute of Electrical and Electronic Engineers (IEEE). They have an agreement with UMI to produce their full text on CD ROM, and that excludes the scanning and storing of their materials by any other vendor.

However, they will allow us to scan an article for the purposes of delivery. We must scan it and send it as if it were a FAX, but we cannot store it optically on a disk. Running parallel with our efforts to get permission from publishers, the

Copyright Clearance Center (CCC) has had a campaign underway since mid-summer. Those members of the CCC were asked if they would object to the scanning and storing of their articles under an agreement that would require a copyright fee to be paid each time the article is scanned. If you scan it and store it but don't deliver it, there would be one fee, and every time you deliver it, you would pay an additional copyright fee. We have been participating since 1987 with the CCC. We do pay the copyright fees for all articles we deliver. The CCC has been successful in getting more than 300 publishers to agree to allowing their material to be scanned. Of those, 43 are publishers from which we index and abstract articles. That corresponds to 226 titles that we have the rights to scan and have available for delivery, although we would not scan retrospective material. If we have the journal, we may scan it and store it, but the society or the publisher is not giving us retrospective materials. However, the other three publishers I mentioned earlier are giving us ten years worth of journals and conferences, which we will have scanned and available for delivery. This technology enables us to deliver articles very quickly and efficiently. Our goal for those societies or publishers who allow us to scan retrospective materials is to deliver an article within hours of a document request.

We spent a considerable amount of money automating our document order system and can provide the means by which a customer can download a citation from one of our own databases. We can also provide order software that will E-mail a message directly to us, and the article will be processed automatically if it has been scanned. There will be some human intervention if it hasn't, but the goal here is to make these available quickly and efficiently.

Now some of the characteristics of the system that you may be interested in. The delivered articles are scanned images, not ASCII files. If you chose the Internet, you received an image file. It is not in machine-readable form. It is a snapshot of the page, and you simply will be able to view it on your screen, but unless you're using a 19 inch monitor, you probably won't see the whole thing on the screen at the same time. Essentially, you receive a file, and you can either print that file out or you can then route it through your network once it is received. The only fee for using the Internet for document receipt is going to be the requirement of a PC, a laser printer, and software. We will provide you with the software, but the PC, the laser printer, and some of the hardware connections are going to be yours.

We think that Internet document delivery will be a very successful approach, so we have explored for 1992 the possibility of offering document subscriptions. If you subscribe to Compendex* Plus on CD ROM, you would be entitled to a certain dollar amount of document delivery services from Engineering Information. We have to work that out with Dialogue, our partner in the CD ROM business. The data disks will come with document subscriptions. This will affect some of the institutions who are spending a lot of money on journals. Libraries will know with certainty that 3,000 engineering titles reside on their shelves; they reside there not for circulation, but solely to provide articles for delivery to you. A publications list is available from us at no charge. I doubt that at this stage of the game, receiving a document as a scanned image, given costs of storage, etc., will have an impact on your decision to buy a journal. That decision will be affected more by the situation in electronic publishing when the ASCII files (the machine-readable text) are available.

In our case, they are not. We are not in that business. We are not publishing ASCII text or full text CD-ROMs or anything of that nature. We are merely delivering a scanned image to a PC. We are spending a considerable amount of effort on Internet delivery. To that extent, one of the things that an organization such as ARL might want to look at is the kind of standardization that is going to be used, if any, for the decompression software. Currently, the Research Libraries Group offers a product called Ariel. Ariel is decompression software that RLG is promoting over the Internet. It is not in the same format that ours will be. We will support the Ariel product by making our data look like Ariel, but we will also be providing you with our own software, and we would hope that somewhere down the line, there aren't too many competing decompression formulas.

We will further distinguish ourselves from the Engineering Society's library because we will be moving out of New York City in the spring of this year. The founding societies have decreed that associate members are not going to be tenants when their leases are up, and our lease time is up, so we must move out. We still currently use the Engineering Society's library to some degree, but we are now going to develop a network of document suppliers. One of the groups that we are talking to is MIT. We will be using the Internet to bounce images back and forth to Lehigh, MIT, and perhaps with Duke. The real future is cooperation with the publishers, getting the rights to scan and have these things electronically available, and then providing a service that the libraries can afford.

That is, in short, what we are doing in document delivery. I will be happy to field any questions that you might have.

MS. CHAMBERS: Are you anticipating extending your retrospective holdings, and will it be 11 years and 12 years and then 15 and 20 years?

MR. GANNON: No. We will probably maintain a rolling ten years worth of materials for immediate delivery. Then as it drops off, we will migrate that to some other storage media, so it will always be there, but may fall out of that category of material we are able to deliver rapidly.

MS. CHAMBERS: In other words, your intent is to archive it?

MR. GANNON: That's correct. Our statistics show that approximately 70 to 80 percent of the document requests currently come from five years worth of materials. Some publishers have materials that because of their nature go back a little bit further. So those types of documents may be stored for ten years back.

MS. CHAMBERS: Are you envisioning being of service to a library that will then transmit back on their campus, or envisioning a service to individual participants?

MR. GANNON: I would suspect our point of entry would be the library. How it would work would be dependent on the library. It might be an inter-library loan. It might be at theEngineering Library itself, but we don't believe that our documents will be ordered extensively by individuals, although we certainly offer our service to individuals. We would be happy to provide them with the tools they would need to receive a document, but what you will find if you are using the Internet is that the communications software may not be the same communication software that you're using between your mainframe and your network. So the file will reside at the point of entry on the campus, and then your people will have to determine the best way to get it. We use something called TCP/IP. If that's the communication protocol being used, then we could take the individual order and route the document directly to that address. If not, there will be an interim step.

MS. KAUFMAN: Will you be able to accept a request from one address and deliver the document to another?

MR. GANNON: Yes, absolutely. We will provide the necessary template. Ultimately we can take this as far as having the person requesting it dial right into our service and fill out the necessary information, and that request will be processed automatically. Currently most of our orders are downloaded from Dialogue and then printed out. We will always offer EI Order, which will, unless you're a subscriber to EI Page 1 (a database product) require you to manually enter the bibliographic information. Then it will go through our E-mail system, no charge to you, and we will download it from there. So the answer is yes, anybody can order it. We just have to set up the accounts and flow so you have the authority to order material and have it delivered to somebody else. There will be a series of information we will need so that nobody's order goes to somebody else who can't or won't pay for it. We don't want to get into that situation either.

MS. NUTTER: As you know, we are involved in the transmission of digitized documents. While our community that we are working with right now is the lands rec community, we have focused on agriculture, but on our own campus, we have begun to experiment with the engineering community. That community is not interested in print documents. What they really want is the file delivered to the workstation, and they want to be able to manipulate it.

One of the things that we have begun to work on now is direct delivery to end users. It does not have to go through the library. All of the software that we are working with is public domain software. Anything that we are developing we hope to be able to share with the library community at cost. We're not out to make a profit, and we are hoping that fairly soon we will have some products to offer and some experiences to share. That is going to make this a cost-effective proposition for the libraries.

MR. GANNON: I suspect that's going to be happening in quite a few arenas. We certainly don't have any corner on the market on that. We're developing our own products because we need to have access to the customer, and if the customer doesn't have the software, we can tap into it. That's why we are developing our own.

I might point out that our schedule for this software is such that in December or January, we will have the IBM compatible software running. In March, we intend to have products that will allow the decompression software to work in the UNIX environment. By June, knowing how our software product project is going, we intend to have software for the Macintosh. We intend to support as many operating systems as we can.

MS. BRYNTESON: I'm wondering about the costs of your product. You are, as I understand, a not-for-profit organization, and so you're a wholly

owned subsidiary that's also not-for-profit. If this would catch on and have multiple uses, would you then see your prices going down?

MR. GANNON: That's a somewhat loaded question. We are a not-for-profit corporation. We are not a membership corporation, so our revenues are derived solely from the sale of our products, and thus the *Engineering Index*, *Compendex*, *Page 1* and documents all contribute to the organization's revenue.

I suppose in the practical sense, we are not-for-profit because we never seem to make any money, but from a structural standpoint, we are not not-for-profit, not a membership corporation. Tangentially, though, I believe that the market is going to dictate the cost of these documents.

There are some very big players getting involved in document delivery, and I'm sure you're all aware of the facts on some of the other groups who are going to create systems, CARL, for instance, and I don't think it's going to be the world of document brokers as much as it has been. I think there is going to be some shakeout over the next three to four years, and our strength is going to be that we have the materials. After about five years of collecting these titles, we won't need a network of people running around the California library system photocopying articles. We don't need all of that. That's all going to be on our shelf, and hopefully a substantial portion of the ones that will be most asked for will be in a scanned format. If that's the case, I can definitely see the price coming down. To give you an example, our current price list says a document costs $15. That includes first class delivery and the copyright clearance charge. If we were to offer that subscription to documents in our *Compendex Plus* CD ROM subscription, you might find that that subscription would include $400 worth of document delivery services from which you would select services such as rush, FAX, etc. from our price sheet. The actual price per article is going to be included in our subscription so we will take some money and move it around, but we are trying to promote the document delivery.

We think the subscription is one of the ways to do it. That is the long answer. The short answer is yes, prices will come down, but they will be driven down because of the market.

MR. GHERMAN: I think these are stimulating thoughts. Mike was saying earlier that you walk a thin line between the publishers and the service, and that if we all decided to cancel these journals and subscribe to Mike's service, Mike might not have the suppliers behind it. It's going to be interesting and we will see how this is going to play out.

RESEARCH COLLECTIONS

"DETERMINING VALUES RELATED TO COLLECTION DEVELOPMENT IN RESEARCH LIBRARIES"

Harold Billings
University of Texas

MR. BILLINGS: This session is going to be based on a survey to explore the values that influence and guide ARL directors' approach to collection development. This exercise, which has been used successfully in the ARL/OMS Institute on Collection Evaluation, is designed to promote provocative discussion and to assist the ARL Committee on Research Collections in determining the priorities and issues it should address over the next two years.

A good deal of library practice is based on the values and philosophies of individuals and groups within research library organizations. Just as individual libraries' collection development decisions invariably reflect both logical and value elements, so do the decisions made by the ARL Committee on Research Collections. Incompatible values among ARL member directors or institutions, or failure to tolerate the values of others, can be a primary source of conflict, debate, tension and frustration. It's important, therefore, to be clear about the values that influence and guide our approach to collection development issues facing the Association.

You all have a list that came with the packet (see page 81). This list contains sixteen collection development values arranged in random order. First, each of you will take the list and study it. Then you will will be asked to place a "one" next to each of the five values that are most important to you individually; place a "two" next to the five values that are next in importance, and a "three" next to those of least importance to you. Then we would like to tabulate the numbers for each of the values as scored at your table. We will then try to tally all the tables and have a final group discussion.

[At this point, the session adjourned into group discussions.]

MR. BILLINGS: I would appreciate it if a couple of you brave souls could share some ideas from the discussions at different tables. You have worked on tabulating. I have a feeling it's going to be rather difficult to do. As I worked on this the other evening, I wondered if the values that I assigned would have been the same two or three years ago. Would they have changed, and if so, how would they have changed? Comments?

MR. MOSHER: My group felt that rather strongly, although we ended up with equilibrium in terms of our top rankings: 16 was the leader, followed closely by 14 and 6 (all of which have to do with access and resource sharing). The others at the top of the list were 1, 2, and 9, which had to do with supporting the user's work on campus. We didn't know where the materials would be, but that might well have ended up reversed. We might even have had less of the sharing and more of the owning. We felt five years ago that we had everything we have today.

MR. BILLINGS: Let me ask a slightly different question because I didn't mention this to begin with. Was there any other value that any of your groups came up with that wasn't part of the the 16-item list?

Let me mention something important that occurred to me earlier. It seems to me those of us in research libraries have more and more of an obligation these days to think about making our information resources more accessible to the information deprived. This is an important issue in my home state because it is so large. Because our information resources are so rich despite the fact that we've lost funding and have had to cut subscriptions in comparison to other institutions of higher education. In our state we are "richer" than they are. One of the things that I'm trying to do is open the information doors to those folks who are in south and far west Texas. They simply don't have collections there at all like those that we have in the Houston and Dallas areas. It is something that we have to do, and we must do it on a national basis. Those of us in institutions that have these riches must find a way to make that information more accessible. I think it is socially responsible, and an important consideration to keep in mind. We should put this as a bullet on our future agenda for the Research Collections Committee to consider.

MR. LUCKER: I agree that we should do that, but maybe the Research Collections Committee has to

look at the other side of this. Institutions that receive support from the federal government to do research that is part of this whole indirect cost recovery calculation may not have realized that one of the major issues is service to non-university people, and that, in fact, you're penalized in terms of cost recovery, for all the service you provide. If you serve non-traditional people, as far as the government is concerned, we have to deduct that from your base. We have had our doors open to the general public for 130 years, and in applying this miserable indirect cost recovery model, use by non-MIT people is deducted; essentially we have no compensation. The more you help other people, the less support you get from the government.

MR. MOSHER: Even though it is federal dollars?

MR. LUCKER: Even though the message from Washington is share, if you are helping other people, it's going to cost you money. I agree with it philosophically. Financially, I have trouble justifying it with my own campus.

MR. BILLINGS: As I mentioned a couple of times during this conference, one of the personal hobby horses that I'm riding these days has to do with whatever they think is the imperative way of developing an international imaging project. I'm not quite sure at the moment how I want to suggest building that into the agenda for our Committee, but I think it's an important consideration.

Another point that I need to pay more attention to in my own institution is something we probably haven't paid a great deal of attention to yet nationally. It is the area of collection development policy. What we have in place is a rather traditional approach to what we can do with traditional information. We have not started putting in place the collection development policy for electronic information, for CD-ROM-formatted and traditional information, or the new electronic information in terms of the collection development policies that relate to those.

MR. MOSHER: That may be a misunderstanding. We don't collect things because they are electronic, we collect them because they have content important to our users.

Existing policy structures, if you add a component to reflect the kinds of formats that you need according to their content, are perfectly adequate for that. If you have a special policy and you want a separate policy for books, a separate policy for journals, and a separate policy for CD-ROMS, then you do not have a specific policy. The question is merely whether you have been reflecting all of the formats or all of the media appropriate for that subject need.

MR. BILLINGS: What do we do about communication? What do we do in terms of determining that one format should have priority over another format?

MR. MOSHER: That is why you have your policy, to identify those things.

MR. BILLINGS: As I go through the value statements that were ranked number one, I am struck by the pattern of the use of the word "local." There was the use of the word local collections as applied to undergraduates, to graduate students, and to more advanced research. We all would have to consider that those are extremely important to us, but on the other hand, in comparing local needs versus aggregated needs or values, we do have to have distinctive local collections or we do not have distinctive, strong aggregated national collections. So that just the word local as such doesn't extend, as one might imagine, to include that as a secondary focus of importance in terms of improved national programs and systems for access and delivery.

MS. SMITH: This group thought that straight tabulation is not going to be very revealing to the Committee because of the problems with and interpretation of the statements. For example, different items addressing graduate student and faculty needs really are research questions, and the nature of the institution and the disciplines involved allow you to interpret these value statements differently.

People can also read more into the term "developing and maintaining" than perhaps someone just going down this list and making tabulations. What we need are little pockets from this group of consensus rather than a raw tabulation of what the various people did with this instrument. For example, we find it gratifying that one group also agreed that the top-ranked value is number 16. Number 15 was also thought to be an important value, except that we thought that this was something that ARL should be promoting and not necessarily relying on the word "developing." This group felt that values 1, 7, 12, and 13, in addition to 16 and 5, represent values that we would recommend the Committee work into its agenda. In priority order address 16, 5, then 1, 7, 12 and 13. You might find it interesting that the least important value was No. 8, according our group discussion, and not because we don't think that's important, but because we think that that will happen naturally in developing collections in other areas.

MR. WILLIAMS: It would be helpful if we could have some of the assumptions behind these values. For example, if your campus is one that has stated, in a planning mode, that it's going to develop a center of excellence on X subject in the next three years, your answer to No. 3 may be different.

Is the assumption that there is a strategic planning process in place and that the library has been involved in that? If yes, your answer to that question, your priority, your value on that particular distinction is very difficult.

MR. BILLINGS: We have a similar situation when looking at ARL's non-university libraries. The New York Public Library, as such, doesn't really have students and faculty. It is more difficult for Paul Fasana, from his perspective, to address those priorities at all, so it must be rather institution-specific. On the other hand, we must try to get some national values for the Committee to work on that will help the Committee's agenda.

MR. WILLIAMS: If there are some common assumptions that could back up these values in a descriptive way, it would help the process.

MR. BILLINGS: Are you asking perhaps for some articulation of that right now?

MR. WILLIAMS: No, we are asking that the Committee develop a set of common assumptions related to these values. We had real concerns that we had different interpretations on developing collections of national and international importance. Were we talking about the aggregate? What is the assumption?

MR. BILLINGS: I understand what you're saying. Let me briefly review for you. The 1991 agenda was to develop an ARL strategy for building coalitions among research libraries, scholars, and scholarly associations in the area of access to foreign information resources. We have the the Mellon grant in place; ARL activities will be conducted to develop that program, and the Committee will be in a position to help move it along.

Another point for this year is to advise the ARL Office of Research and Development (ORD) on utilizing cooperative projects with the North American Collections Inventory Project. NCIP activity has been pretty much on hold for a while, and as far as we can see, it is still somewhat on hold. That does not seem like it's going to be a major issue at this point at least for the 1992 agenda.

Also on this year's agenda, is to advise the ORD on efforts to secure funding in the area of access to foreign materials. It seems like a rather tenuous point as to how to get hold of that funding. In fact, the Committee wasn't quite sure how this got built in, and we weren't quite sure whether it had to do with the Mellon project activities or with access programs and perhaps acquisition of materials.

In the discussion we tended to agree that there are relatively few federal dollars that are going to be available in the next few years for direct support of the research library agenda. I have some concern, for instance, that we utilize those resources that are available to us; we do have a lot of money flowing into the preservation effort at the present time. That kind of money should not only be used to help preservation per se, but also to help secure a platform to jump from preservation toward some of the delivery issues we have talked about. Again in terms of my personal thoughts about the national imaging project, that's something that could work very well through the preservation activity.

MR. NEAL: There is a change taking place in the HEA legislation as it is being written now to address some needs you have just spoken of. If you read the federal update that has been being distributed here, it speaks about some new language that draws academic research libraries into some of the titles that we previously were not involved in. In addition, Title 6 has a new section, Section 607, that is going to provide significant funding prospectively for acquisition of foreign materials by research libraries in this country.

MR. BENNETT: I want to return to our assessment of values, as that may bear on the shaping of the Committee's agenda. Several of the items that we gave top priority are simply matters of mission. It is our mission to support the research activity of graduate students and the faculty and to support undergraduate instruction. Other items, particularly No. 16, are really instruments for carrying forward the mission. It might be a good idea for the Collections Committee to work to develop some model or demonstration programs of how we might act on those issues that we identified as high priority but that allow us to act on our fundamental mission.

MR. BILLINGS: Any other thoughts? We are getting ready to bring the discussion to a close.

MS. REED-SCOTT: I think the point that Scott just made is a really valuable one. The sense that there are some patterns that relate to local mission, local priorities, and maintaining local collections is a very high priority for many, many of the groups. There are related issues, and they too get very high

priorities: No. 16, developing improved information access; and No. 5, developing innovative approaches to addressing research library needs regarding format. There is quite a bit of valuable information in this in terms of identifying some of the access issues as priorities.

MR. BILLINGS: Something else the Committee discussed that may be of some relevance here was a focus on how we can form, promote, educate, and influence our local administrations and faculty regarding some of the principal assumptions that we are trying to develop out of these discussions and out of the ARL activities. While those of us directly involved in our libraries might share some of the same values and would be chasing some of the same assumptions with respect to these agendas, perhaps our local faculty and administrators are not aware of the issues and the principles that might be involved. We agree that we would like for them to be more informed, and perhaps there might be an ARL effort that could be undertaken to influence our local administrators and faculty.

MR. MOSHER: We were concerned on our campuses that there is an administrative culture and a faculty culture, and the faculty culture wants things done the way they have been done, and wants materials locally to do that. The administrative paradox is drawn. Library directors tend to be caught between those two different cultures on their campus, and what we were interested in is whether there would be efforts on the part of ARL to begin to help us in that particular situation and perhaps even spark some campus change to prevent the awkwardness of that or prepare us better as agents of change on our campus to move us out of that difficult situation.

MS. MOORE: That reminded me of the paradox I feel as well. This idea that we are trying to move toward a more client-centered model, the fact that our clients are fairly conservative, and what is perhaps a move backwards rather than forwards puts us in this constant circle in which we are trying to move forward and be more client-centered, and the clients are telling us to do what we did before.

MR. BILLINGS: I will have to go home and start dealing with a brand new university library faculty committee. These are certainly things that have to be rebuilt on a regular basis, and we do have to pay attention to our local situation and our local needs while looking at the national issues and principles.

COLLECTION VALUES

1. _____ Maintaining local collections that meet most of the advanced study and research needs of graduate students.

2. _____ Improving the aggregate North American collection of foreign materials.

3. _____ Developing local collections that anticipate future curricular or research interests.

4. _____ Improving the North American preservation program.

5. _____ Developing innovative approaches to addressing research library needs regarding non-print formats (e.g. electronic, CD-ROM, etc.)

6. _____ Developing structures and procedures aimed at facilitating cooperative collection development.

7. _____ Maintaining distinctive collections of national and international importance.

8. _____ Improving multi-cultural collections to better serve changing student and/or societal demographics.

9. _____ Maintaining local collections that meet most of the university's faculty research needs.

10. _____ Developing increased federal funding in support of the nation's research collections.

11. _____ Maintaining local collections that reflect and build on historical strengths.

12. _____ Maintaining local collections that meet most of the instructional needs of the undergraduate and that emphasize usefulness of materials to students.

13. _____ Improving the aggregate holdings of North American scientific and technical information, including delivery mechanisms.

14. _____ Making access to materials and not ownership the primary consideration.

15. _____ Developing more effective working links with foreign national and research libraries.

16. _____ Developing improved information access, delivery mechanisms, and procedures between and among research libraries.

17. _____ Other:

INFORMATION POLICIES

Merrily Taylor
Brown University

MS. TAYLOR: One of the things that quickly captures the attention of library directors is economic issues. While we are not all as attuned to what's going on in our government documents collections on a day-to-day basis as we may be to some other issues, something that will bring you up to speed very quickly is your documents librarian's request for five new PCs by next month to deal with some of the problems that he or she is encountering in providing service. This program is, to some extent, a look at financial and other implications of what is happening with government information. When you look into this, you will discover that what is happening is pretty hair-raising and will have implications for other sorts of electronic information.

I want to begin by drawing your attention to the background paper for this session, which I hope you've had a chance to read, because it will enhance, your benefits from the session and ARL's benefits from your comments (see pages 85 - 88). I am certainly not going to go over it with you page by page, but I want to call your attention to the summary of problems that appears at the bottom of the first page because we will want to talk a little bit more today about what ARL should do to deal with these problems.

Just to glance over them briefly, the list of problems includes: the growing proportion of government information that is available only in CD-ROM and online services; little, if any, standardization between titles, products, and services of various agencies; increasing training costs for libraries; minimal-level access software (if anything) is generally all that is available with the products; equipment costs to accommodate new information resources; reduced access to federal data; and lack of an organized response by GPO results in each depository investing its staff development, training and software development to make products usable and accessible.

The majority of the bulletin boards produced by agencies are falling outside of the depository system, and new bulletin board services are not necessarily archived. Therefore, there is a loss of the continuous historical record. Before I began working with Prue Adler on the background paper, I asked our government documents librarian at Brown to comment on some of these problems so that I could get an idea of how it was affecting us at my institution and also if there were other problems that hadn't been listed. I learned some very interesting things. She wrote me a memo in August of 1991 and pointed out that by July 15th, 1991, we had received 61 CD ROMs through the federal depository library program. By the time she actually sat down to write the memo, ten more had come in. These represented 14 titles, both monographs and serials. TIGER disks, which you will see referred to in the document, were "pouring in"— one per state.

One of the problems she had was that we did not or do not have the application software to deal with the TIGER files. It was, I believe, $189. She was curious as to whether we should get it and, how we would handle the very intense use of this material by the patrons. These are the types of files where people will sit down and spend three or four hours trying to download data. If there is one PC in your documents area, for example, how do you deal with that kind of need? Should these disks circulate, and if so, what does the user do with them once he or she takes them out? Another point the documents librarian made to me was that of all the compact disk tools we had received, we actually only had three products up and running for public use. And in order to get those up and running, she had worked very intensively with our systems office, and she went out of her way to thank them for their efforts.

I did have to wonder at that point about government documents operations that didn't have a systems office to fall back on, or that have a systems office that's so stressed out that it couldn't necessarily stop to assist in something of this magnitude. One of the things that dawned on me at that point was that we had a government documents community that is very eager to get into this area and is certainly not resisting information in an electronic form, but really is, in some cases, almost helpless to deal with it.

The second point I want to make is that these problems that we are beginning to see arise and that are outlined in this document are arising just at the time when our libraries are being hit with reductions in materials funds, reductions in equipment budgets, staff cuts, travel freezes, and cuts in the travel budget. Brown, within the last two years, has cut about $250,000 from its operating budget. We are not very well positioned in terms of resources to respond to this need by putting a lot of additional resources into dealing with this material. It's clear

that this is another one of those areas where, if we each try to go it alone, we're going to find it extremely difficult, if not impossible.

A third point, and I think ARL has been trying to convey this to the public printer and to some other key folks, is that ideally the federal depository library program was set up to be a partnership between the participating libraries and the Government Printing Office. Instead, it seems that the libraries increasingly are being viewed as a kind of dumping ground or passive recipient of largess. In other words, once this material is produced physically, it is simply dumped on the world and no one takes responsibility for seeing that it is usable, certainly not at this point the federal government or the agencies.

What are we going to do about that attitude? In today's discussion we are after several things, which I will outline now and then we will return to try to get some focused discussion. The first thing we're after is more input from you on problems that really have not been identified either in what I'm saying right now or in the background document; they are the things that you are experiencing in your institutions that even go beyond what we have talked about here. For example, something that I thought of that was not in the background document per se is the responsibility that we have not only to the public, but to other libraries in our regions, libraries that are not ARL libraries. ARL libraries, however hard pressed we are and however martyred we feel, usually have fairly substantial resources, we often do have systems offices or other forms of technical support. Many of the smaller academic and public libraries that we work with frequently on a regional basis don't have these things. Brown, for example, is the only library in Rhode Island that has access to GovDoc-L, which is the electronic conference for government documents librarians. That puts us in the position of being looked to for leadership often within regions. Many ARL libraries are regional depositories. What is our obligation to the other institutions in the region? Bulletin boards were mentioned as not being available to people in depository library programs. It's not only that they're not available, they're also not consistent or user friendly. There is considerable enthusiasm for getting these things on the Internet, but one has to wonder what the usefulness of this will be if the database itself is so difficult to use that the patron simply gives up

The software that comes with these CD ROMs, if it is even received, is often not particularly user-friendly. Our government documents librarian cited Extract, which is the software for the statistical part of the Census, as being something that has proven extremely difficult for people to use.

I mentioned earlier the fact that some of the software is very difficult to manipulate and seems to take a lot of effort on the part of the user, which again presents difficulties for our libraries if we are going to be the primary site for this use. How many stations can we afford to provide for that kind of long-term, intense use? And, of course, the old problem that many of us who have not been fortunate enough to build new libraries or library extensions are dealing with, is the space to put all this equipment. What is the longevity of the CD ROMs? We are all, to some extent, depositories for this material, but it's hard to know how long a lot of this is going to last or where the ultimate responsibility is for seeing that it is archived.

That is the list of additional concerns that I came up with. We want to hear other things that you would like your colleagues to be aware of.

The second group of answers we would like to hear today concerns whether ARL libraries can cooperate among ourselves to address some of these problems. Where would cooperation be most feasible and most beneficial, and what is the necessary ARL infrastructure to facilitate that cooperation? Some of the ideas that have been discussed, for example, are an ARL survey that would attempt to find out not only who is receiving which products, but what is being done with them. We know that some ARL libraries have been very innovative in either developing their own software or adapting existing software. We know some people have found productive ways to deal with this, but at this point, it is not being shared. If we knew more about what others were doing, would there be the basis for some profitable exchange? Could there be an exchange of library-developed software, perhaps at cost, if we knew where it was? Do we need ARL's help in staff training? Do we need ARL's help to publicize these resources once we have a better understanding of how to help people use them? Another idea was the exchange of guides or policies on levels of service. Certainly in the past ARL has performed a very important function by serving as a clearinghouse. Is there a clearing- house role for ARL here? One suggestion was that we sponsor a visiting program officer or that ARL bring a government documents librarian in as the program officer to prepare a program to begin dealing with some of these issues.

You may recall from the report of the Task Force on Government Information in Electronic Form that one of the suggestions that ARL believed would be useful was the establishment of a three-tier approach to government information so that not every library would be forced to deal with some of these problem and thus reinvent the wheel.

There is some reason to believe that because we are all collecting at different levels, where government information is concerned, that to some extent, this tiered structure may already be in effect. But we need to know more about ARL institutions and exactly what their role is in the depository program. It has also been suggested that a survey might be useful on this topic.

We need to look at new models for providing service. What are some new approaches in dealing with electronic information?

One of the points that we thought was important to make was that although government information is unique in that the free market doesn't really operate (you can't just pick up and go to another vendor if you don't like the way they are handling your business), there is also an issue of the taxpayer's right to have access to this material.

But other things about the way this electronic information behaves are not unique to government information. Some of the problems that we're encountering actually apply to databases produced by commercial vendors as well. What can we learn in terms of government information that we can apply to that area as we deal with these problems?

The third area in which we would like to get your insights is where ARL should focus its persuasive abilities when it comes to the work that it does so well with our government and its various facets. Some people have suggested that the Federal Depository Library program could provide more services if it were better funded. Should we be lobbying for more money for that program? Others have said they do not know because they are not sure that they would use the money for the things we think are the priorities. They might hire more inspectors. How firmly should we get behind the WINDO idea that many people are suggesting that GPO support? Should ARL put a lot of effort into this? Another suggestion, and this is an ongoing effort, is that Title 44 should be strengthened to mandate that electronic products produced by the agencies must be available through the Federal Depository Library Program. On the subject of federal standards for electronic products produced by agencies: should the government get its act together and make sure that standard software is available for these CD-ROMs and not permit an agency to simply come up with yet another new approach?

119TH ARL MEMBERSHIP MEETING
Mayflower Hotel, Washington, D.C.
October 23 - 25, 1991

PROGRAM SESSION III:

INFORMATION POLICIES

The purpose of the Information Policies Strategic Forum is to initiate a discussion and evaluate current challenges facing ARL libraries in the United States and Canada in providing access to government information in electronic format. Access to the government information -- scientific, technical, economic, agricultural, demographic, research and development, and political -- is a key component of the research and education process and is integral to the ensuing contributions of the research and education communities to the government research enterprise. Research libraries play a pivotal role in both providing access to these information resources and in maintaining government information as a "public" resource, increasingly with economic value.

Case studies summarizing problems with specific datafiles, including bulletin boards, highlight common problems and opportunities facing ARL libraries, involving related issues of cost, training, staff development, and software development. The goal of the session is to identify a possible new leadership agenda for ARL in this arena, both through a more structured resource sharing program and through ARL's ability to communicate research library concerns to scholars, public officials, vendors, and publishers.

Summary:

- growing proportion of government information available only in CD-ROM and online services;
- little if any standardization between titles/products and services of various agencies;
- increasing training costs for libraries;
- minimal level access software generally all that is available with the products;
- increasing equipment costs to accommodate new information resources;
- reduced access to federal data;
- lack of an organized response by GPO results in each depository investing in staff development, training, and software development to make products usable/accessible;
- the majority of bulletin boards are falling outside of the depository program;
- few bulletin board services are archived therefore there is a loss of the continuous/ historical record.

Forum Discussion: Research libraries face equipment, training, and financial investments and challenges in providing access to the growing body of government information in electronic format. For many datafiles, depositories have been able to only provide minimal access to the data and for one critically important series, the TIGER files, little access has occurred due to a lack of public domain or low cost software and needed investments in equipment and staff training. This combination of factors prompts a reexamination of how research libraries provide access to government information in electronic format and consideration of new possible cooperative measures.

- Is there a need to pool ARL expertise concerning how institutions are providing access to the federal information resources in CD-ROM format? If so, what steps could be taken to ease or alleviate some of the training, software, and documentation problems that depositories are experiencing? With GPO at present unwilling to initiate "user services," is there a role for ARL in providing feedback to agencies on their products and services? Should special arrangements with software vendors be sought similar to the Precensus TIGER experience?

- ARL has been encouraging GPO to provide agency datafiles via the Internet. If successful, does this provide new networked-based opportunities for libraries in access to and sharing of datafiles? Should there be a more aggressive program whereby GPO would provide a gateway service to datafiles/bulletin boards as proposed in the WINDO bill? Some of the bulletin boards contain ephemeral data but others contain information important to the historical record. Few agencies are archiving these data. Should ARL be working with agencies and NARA to identify those records or types of records requiring additional consideration? Although NARA is beginning to examine electronic records issues, to date bulletin boards have not been included.

Background: Following years of debate, evaluation, and review concerning the appropriate U.S. government role in provision of government information in electronic formats to depositories, the Government Printing Office (GPO) in 1988 began to offer selected CD-ROMs, online and bulletin board services to participating depository libraries. To date, GPO has offered 75 unique titles on CD-ROM (representing well over 120 discs) and access to the Economic Bulletin Board from the Department of Commerce, the Federal Depository Library Program Bulletin Board (an in-house bulletin board service) and the Hermes Project (the Supreme Court opinions without indexing). Eighteen libraries also participated in a seven-month pilot program with the Department of Energy to improve access to DOE Energy Research Abstracts and related data.

GPO ships information products as received from federal agencies to participating depositories. GPO does not change or enhance information received from an agency excepting possible format changes from paper to microfiche. As a consequence, in providing **CD-ROMs** to depositories, GPO may send discs with or without access software and with or without adequate documentation. Since each federal agency selects its own software, there is a lack of standardization between titles and some agencies have used proprietary software. The lack of standardization and the variation in and availability of software and documentation has resulted in equipment and training costs for each depository and reduced access to important government information.

GPO's experience with **online services** is limited to the four services listed previously. The agency has not sought out new offerings even when requested by the library community, e.g. the Department of State *Dispatch*. For those online files available via the program, depositories assume the telecommunications costs.

For online and disc datafiles alike, GPO views its role as a production shop. It does not anticipate a more aggressive posture for example where software (and in particular that in the public domain and at low cost) is identified, evaluated, or recommended and/or documentation is enhanced. GPO also does not foresee a training function within its mission to assist depository

librarians with utilizing the growing share of the government documents collection in electronic format.

CD-ROMs: TIGER: Over the past three years, the Bureau of Census has been at the forefront in introducing its products in CD-ROM format. Depositories electing to receive 1990 Census data and other CD-ROM products are discovering both new opportunities and drawbacks that come with this new format. The ability to manipulate the Census data with other datafiles and create new data sets has led to better use of Census data, opened up new applications of the data, and created new demands from users. Unfortunately, many of these new applications are occurring outside of the library because of a combination of Bureau of Census policies to include software that provides only minimal-level access (e.g. that creates subsets of data but does not permit data manipulation,) and the added training and equipment costs to depository libraries.

The TIGER, the Topologically Integrated Geographic Encoding and Referencing System is the "map database that automates the mapping and related geographic activities of the Bureau" and will support the economic censuses, surveys, and other Census Bureau programs. TIGER/Line files cover every county in the US as well as Puerto Rico, the Pacific territories and more. TIGER files replace the printed (and microfiche) maps of the previous decennial censuses. Geographic Information Systems (GIS) software is needed to fully utilize the TIGER data.

GIS is a geographic database manager that allows a user to capture, store, retrieve, manipulate, analyze, display and output locational information. GIS permits libraries for the first time to create maps that utilize a variety of information resources in an integrated fashion. In addition to existing uses of Census data, new opportunities for libraries in support of research and education include applications in local, state, and regional economic development programs, planning, land use, engineering, facilities management, and more. A growing number of agencies including the U.S. Geological Survey, the Environmental Protection Agency, the Defense Mapping Agency, and the United Nations are providing data utilizing GIS and these files will likely be available to depositories via GPO.

Initially, the Bureau provided extracts of the TIGER database or Precensus TIGER/Line files to selected depositories and the TIGER/Line files are now routinely shipped to depositories as available. When the Precensus TIGER file was shipped to selected depositories, special arrangements were made between the depositories and software vendors that involved introduction and evaluation of software products in exchange for a "free" software license (not arranged via GPO). No comparable arrangements are in place for the TIGER/Line files. GPO recently announced that a public domain software package, MARPLOT, will be available at some point in the future. This software will permit minimal-level access to the TIGER data.

GPO provides some tips and lessons learned via *Administrative Notes*, a depository publication. In addition, GovDoc-L and MAPS-L also provides a communications forum for users to exchange information on these and other files. Training sessions, the formation of user groups within the depository program, or arrangements for other software packages are not planned by GPO.

Bulletin Boards: An informal survey in the spring of 1991 identified 60 bulletin boards operating throughout the U. S. Government. These boards range from the *EIA BBS* at the Energy Department that provides statistics on energy production, the short-term energy outlook and survey prices, to *Cleanup Information* from the EPA, an information exchange on hazardous waste removal, to the *Criminal Justice Reference System* that provides Institute news and Bureau of Justice Statistics data. Increasingly, agencies are discovering that bulletin boards are an inexpensive means to disseminate information to their user communities while at the same time, meeting mission requirements in a more effective manner. Although these services do provide a new and in many cases effective forum for presenting federal information, new problems crop up as well. The Department of State database illustrates some of the problems associated with bulletin boards.

In December of 1990, the Department of State announced that it would no longer publish the Department of State *Bulletin*. This publication provided a range of important national and international information including U.S. treaty actions, foreign policy summaries, updates on international events, appointments, major foreign policy speeches and congressional testimony. The *Bulletin* was considered a key source because it combined data available from eighteen other sources in a timely manner. The reaction from user communities including libraries was such that publication was resumed but in a more "streamlined" fashion in a new publication called *Dispatch*. In addition to the *Dispatch*, the Department of State initiated a computerized news and information service. The service, available via the Computer Information Delivery Service (at the Department of Agriculture) carries full text of the *Dispatch*, official transcripts of daily State Department press briefings, travel and foreign advisories. The *Dispatch* plus the new online service provides the same data and more formerly included in the *Bulletin*.

Special access arrangements to these data have been made for depository libraries. It should be noted that these provisions are unusual and distinguish this board from most other government services, albeit with costs. Depositories are considered "government cooperators" and as such can access the file for $.0017 per line. Depositories continue to receive the printed version of *Dispatch* though there is substantial additional information in the online file not included in the printed version.

Conditions regarding archiving and content as noted in the Department of State press release outline agency and contractor responsibilities. "The State Department and other loading agencies determine what goes into the system, how long it remains, the form it takes, and when it will be updated or deleted. The contractor has no responsibility for, or authority to select content."

MS. TAYLOR: One of the things you have in your packets is a sheet about the Geographic Information System (GIS) literacy project. This is a category of software that is intended to go with the TIGER files to make them easier to manipulate. There is some prospect of a pilot program whereby ARL libraries might be permitted to use this software on a test basis and work with the developer on new applications; the idea being that this GIS software is applicable to more things than TIGER. Do we want to encourage people to pursue that?

At this point, I will return to the first subject that we were talking about—more discussion of some of the problems we've encountered and what people have done about them.

MR. BOISSE: I want to talk a little bit about the TIGER files. We've been working with GIS systems in Santa Barbara for some time because of our very large collection of satellite imagery. But we have identified two kinds of problems related to using the TIGER files: technical problems and people or user problems. I would like to go through what my staff has put together as a list of the major problems.

The first problem with the TIGER files is that you receive them from the Census Bureau with absolutely no software provided. It would be as if the GPO sent you a zillion words of the Census information in print format and said, "Here is all the Census information. Now you put it together so that it makes sense and so that your patrons can use it." That is really how it comes. There is minimal software for statistical data other than TIGER files, and it's even worse beyond TIGER.

The Census Bureau, as late as last month, said again that it intends to offer no software to go with the TIGER files and no software to help overlay the data on the maps that are digitized in the TIGER files. The Census Bureau has left this challenge to commercial firms which have responded, as my staff says, with a bewildering array of software that is seldom evaluated and may or may not be appropriate for the needs of the libraries' users. We have to explore solutions to this. And I think that USCB, as an organization, is in favor of the TIGER literacy project. I'll say that right up front so you know where I'm coming from. The opportunity for ARL to work with a commercial firm to improve the kind of software that they're making available to us would be truly a very good thing.

Another problem is that the digital data sets resulting from the 1990 Census tend to be very large, especially on the mapping side, the TIGER boundary line files. Libraries, for the most part, do not have the necessary equipment to process these huge data sets. For instance, a GIS information system, even a relatively unsophisticated system, requires approximately 10,000K of random access memory, and I think that very few of us have many stations with 10,000K of random access memory available for our users. The typical library setup with a PC, a printer or a CD-ROM workstation simply is not going to work in this case. It's necessary to set up some mini-workstations and to try to network them so that more than one person can use the data at the same time.

Another problem is that the data that is coming on CD-ROMs is good. Actually, CD-ROM is a wonderful storage device because you get a lot more data into a lot less space. However, access is very slow if you do it on a PC, and there is at least one software package that is presumably made for a PC but it's very slow. So you run into the same problem of access to the data and how to make it possible for multiple users to use the information at the same time.

The GPO has run into distribution problems in getting the TIGER files out. To date, we have received 35 of the 44 projected TIGER disks, but unfortunately, not the three CDs that are going to make up California. They haven't come to us yet. Some of the disks are apparently not sent out or are sent out to some libraries but not to others. There is no established system for keeping track of this.

Our documents librarians, through their network, have actually been sharing information. And when someone receives a particular file, it goes out on the network so everybody else knows they should be looking for it. And if you don't get it, you claim it very quickly, because these things are going out of print fast, at least as far as the free distribution is concerned. If you don't get them that way, they cost $250 per disk, which is not an insignificant amount of money. Government document librarians have been trading these like baseball cards—trading Oregon for Idaho, or things like that.

Another problem with the TIGER files is the arrangement of the data on the files. The disks are

not arranged alphabetically, and some of the states require more than one disk. Florida, which requires two disks, has Idaho on the second disk. It would be better to have an alphabetical arrangement. At least it's easier for the users if they can approach things in that fashion. It doesn't create a problem if people are downloading from the database by counter. But it can be a problem in getting to the data in general.

Of course, then there is the question of the archival quality of the CDs. We really don't have enough information about that to know whether or not we are going to run into problems, and, if so, just how soon that might happen.

The questions asked by users require the use of relatively complicated software. Here we have the GIS software, but the problem here is that it puts a real burden on the library. When it was a paper product, even the student employees at the Information Desk could at least take someone over to that array of volumes and say, "Here is the Census data." It's a little more complicated now, although I think maybe some of the students would be more adept at using the software packages than some of the librarians. But we do have to have training programs for library staff because it's absolutely essential that our staff members know how to use the data so that they can teach the patrons. We also have to do whatever we can to encourage the software companies to develop user-friendly software. And we have to provide them with more information about that because a lot of them have not developed their software bearing in mind the information that we as librarians have about how users want the data, how they want to be able to access it and use it. We currently have about six different software packages that we've looked at in our library. Atlas GIS, in our opinion, is the pick of the litter so to speak There's Image USS, which is a very difficult software package to use. It assumes considerable knowledge of DOS and past experience with TIGER files by the user before he or she even gets into it. Map Info is another one. There's Montage and then there's Tiny TIGER. There is also a product for workstations called Arc Info, which is put out by a company called ESRI. It is fairly complex and not terribly user-friendly. There is a PC version. I think it's called PC Arc Info. We haven't been able to evaluate that one and we don't know if it's going to be much more user-friendly than the larger version.

The software packages that are available now presuppose a great deal of knowledge on the part of the user, so librarians have to be prepared to be able to explain a lot of that to the users. Therefore, there has to be training available. This is probably an area where ARL can contribute by designing a training program so that we're not all starting from scratch as we try to provide adequate service to our patrons. We have had to try to exert pressure on the software producers to not only develop more user-friendly software, but to attach simple user tutorials to the software so that somebody using it for the first time can practice and can teach him or herself how to use the system effectively and efficiently.

Another problem is with the number of people who can access the data at any one time. When you have the print product and all those volumes on the shelf, it is easy to have a half a dozen people rummaging through the data at the same time and probably finding the information they need. With digital data, it is going to be necessary to consider networking within the library in order to make the data available to more than one individual at a time. Users at different desks in the library should be able to access the data from wherever they are, without having to go to a central location.

These are some of the kinds of problems that we have to deal with, particularly with the GIS systems. And with the Census data coming out in that form now, it is a problem that is already here. It is not a problem that we're looking at for six months or a year from now. It is a problem that we should be working on together to try to overcome some of the hurdles that this new technology has put in our way.

MS. TAYLOR: Some of you may be sitting here with a sinking feeling in the pit of your stomach about why you haven't been hearing about this from your documents person. When I began to get the information from my documents librarian, I was horrified because I had thought of this as a problem that was dawning. I did not realize how quickly the sun had risen and that there was a full-scale heat wave going on. Are there other experiences here that people would like to share or bring up in terms of something that hasn't been covered?

MR. DE GENNARO: I don't have any experience with this, and that's my problem. But what I hear is that this is a big problem and we should perhaps be working through ARL to help solve the problems that have been created by distribution of government information in this form. Wouldn't it be better if we put our efforts into trying to get the Government Printing Office to issue the information in proper form. In other words, attack the problem at its source. Is there some Republican policy that they have to issue the information in this form in order to give the information industry an opportunity to write software?

MS. TAYLOR: As you know, that's been going on for some time. There is a great interest in privatization and giving the commercial sector an opportunity to do this instead of expecting Uncle Sam to do it. What we're hoping to get out of this meeting is really not an either-or. We need to do both. The government documents people are not convinced that GPO is doing everything it can to work with these agencies and persuade them to perform differently. There is absolutely no coordination among the agencies in producing this software. They don't know what one another is doing. So they are each creating this information and some of it is going through GPO and some of it isn't. We do have to work at the source. But before we can get the source to change, we're going to have to do some things among ourselves, because by the time we see a change, we'll be buried.

MR. WYATT: It is a bit of a misconception to think of GPO as being the source. GPO is only the source that routes it to us. The source of the information is all over the government; a great number of agencies produce the information, the documents or the CDs. And to attack the problem at its source would mean going to all of those agencies. I agree that we have to attack it through GPO. Staff has worked on that and has worked with GPO very hard. GPO is not particularly receptive to assuming a more aggressive role in trying to resolve the problem at the governmental level.

MS. KAUFMAN: The problem of working with the agencies is also difficult. We were involved in two pilot projects, one with the Economics Bulletin Board and one with the Department of Energy. The Project Manager reported the following: "In the case of the Electronic Bulletin Board the promised support materials never arrived. Phone calls for technical assistance were answered by someone totally unfamiliar with the project and the final evaluation questionnaire never arrived. So it's no surprise we didn't get the promised final evaluation."

We went into these pilot projects hoping to work with the agencies and come out with useful products. We thought that with the downloading of records from an online database for subsequent loading into local catalogs, in addition to traditional bibliographic searching of the energy database, that access would be enhanced. The DOE project was generally acknowledged here to be poorly conceived and terribly executed. They scheduled an all-day training session for participants, so we were off to a thoughtful start. "But the technical conceptualization appeared lacking. Records were not standard. It was time-consuming to download them. Required programming was extensive. And we have a report that one participating library spent $5,000 for programming." There was no recognition that the additional records would require additional storage space. The output formats with pages of paper between each record resulted in needless waste. There was no cost data at the conclusion of online sessions, no monthly session details were given for online searches. This was a time-consuming and annoying situation. In short, here something else would have worked better." Our staff member's conclusion sums up everything in dealing with these GPO agencies.

Quoting again, "Where the GPO did not foresee a training function within its mission, what other producer of a database could get away with that? 'Here's our database. No documentation. No training. No assistance. Good luck.' "

And that is the situation in which many of our staff members have found themselves.

MR. GETZ: For the 1980 Census there were designated agencies from each state that handled the sixth count. That was a source where one could go as an investigator for more detailed Census information than my library certainly cared to accumulate. Is that contemplated for the 1990 Census? Are there designated state entities which might process Census information?

MS. ABELL: There are state data centers but they too have the same problems without the finances to purchase the expensive software. They are trying to get the state funds, but some of the software is $30,000.

MS. BENGTSON: Do these agencies really have any incentive to do anything better than they are presently doing? They distribute the CD and that takes care of their obligation as far as they are concerned. And so what incentive do they have to do better?

MS. TAYLOR: This gets into things we've been talking about for a decade in regard to the entire present philosophy of government information, the whole dissemination function and the real need to be proactive in seeing that this gets to the public. It just hasn't been there. You could argue that if it should be any place in the government, it should be in GPO. But it doesn't seem to be there either.

MS. VON WAHLDE: This is "deja vu all over again" because government information certainly identified these problems before they found them-

selves living with them. But if we were to look at trying to make some changes in the system, is there anybody that's influenceable? Is there any way to address this, or is it just so dependent on the individual agencies that there is no way that any kind of ground swell or political pressure could be brought to bear on the situation?

MR. WEBSTER: We're certainly working, on at least on three levels, with GPO in trying to urge them to make some changes, through our congressional contacts and through a very active program to influence legislation.

MS. VON WAHLDE: If a congressman heard from his constituents that he can't get anything out of his library —

MR. WEBSTER: It's a response from this group that would bring out an avalanche of letters to congressmen.

MR. FRETWELL: I think those members that might have a state representative on the joint committee in printing may be helpful.

MS. TAYLOR: Let's face it, we did not all come up through government documents experience, and a lot of us don't know as much about this area as we would like and haven't been as conscious of these issues as we should be. In part we're hoping that people go home and begin looking into it, because I suspect there is a tremendous hidden cost in a lot of libraries, and not significant in others.

MR. DAVIS: I note from the last evaluation we had, and this is where I find it very strange, that they wanted to know how much public use was being made of this, that maybe we weren't fulfilling our responsibilities. We really need to take advantage of the valuable process to point out what those problems are, and to really see that that doesn't get buried in a report, but that it is sent to our congressional leadership and sent to others that might be able to use it. There is a mandate to make all that information available, and yet here's a barrier that's being created by the way the information is being made available.

MS. CLINE: We need to be very careful in how we frame our statements and our concerns, because there are those in the information industry, in other entrepreneurial roles, and within our campuses, who would stand back and say, "Well, it's just that libraries and librarians and library staff don't know how to work with these resources."

We could find ourselves suddenly set into a technological context questioning our skills and abilities, rather than the real issue of what the government agencies are accountable for in terms of responsibility to the public at large, of making the information accessible through the depository library programs, et cetera. We have to be very careful that we also help our staffs, particularly our documents experts, because they are talking a lot in other contexts (SLA, ALA and so on). In many cases their voices aren't going up through those organizations. Their messages aren't reaching the larger part of the organization. We could find that the criticisms are suddenly turned around with people saying that the information is useless. There are people who don't understand the responsibility toward federal information, the public's need to know and our Constitutional and legal framework in which this information is to be made available to the public. Librarians pick up parts of the issues and then some may say, "Well, if you've got all this useless government data, why do you bother with it anyway? Why don't you just buy what you need from a real publisher?"

MS. CHAMBERS: Has the Depository Library Council taken this up?

MS. TAYLOR: I believe so, yes.

MS. BRYNTESON: How are the government agencies providing access to the information for their own staffs and for other government agencies?

MS. TAYLOR: They are probably using their own software, which is satisfactory for them in many cases. The problem is that if they're all using different software it is a difficult transfer of knowledge when it hits these depositories. In other words, if you're only using one set of data, you don't have as big a problem as the depositories do.

MR. KOBULNICKY: I happened to visit a friend at NSF after the meetings last night and she was showing me her system. It was so well menued that you don't have to do anything. So, yes, you're right. Within a small framework, it's very easy to make use of the information.

MS. TAYLOR: I was going to suggest that we talk for a little bit about what ARL could do in terms of using its persuasive influence and on whom to use it. Could we return to the issue of whether we should cooperate among ourselves to try to deal with some of these problems? I feel, again, just stating my own opinion and not my opinion as Chair of the Committee, that we're probably going

to have to take a dual path here, because I don't think we can simply sit back and focus entirely on the lobbying. I think there may be a need for some cooperative effort. How do you feel about, for example, the value of a survey to find out what our member libraries have already done with some of these problems? Are there other areas where you think cooperative efforts may be useful?

MS. CLINE: Everybody knows what ultimately is desirable. It might be helpful to put in the front matter of that some of the existing work that has been done. I learned a lot just from listening to what Joe had to say, and I'm sure if there are a couple of other centers where people have already invested, it would help us to know about that.

MR. SUMMERHILL: I work for ARL, and most recently I worked for Washington State University. I sometimes felt like the systems librarian just for documents. One thing that's been on my mind for a long time is that there's a fear that if the ARL libraries band together and put data up at some location and make it usable, that the government will also react by saying that data is perfectly usable and we don't have to do anything to make it any better for you. I saw Bill Joy, who is the chief technical officer of Sun Microsystems last week at the EDUCOM conference, and he pointed out a critical problem in America. We do not have comprehensive legislation to handle electronic data information. There's no national information policy. And we are going to fail to be competitive in certain markets in the next couple of decades because we don't have the legislation in place. I wonder if this issue of government publication could not be used to leverage the information policy.

MS. TAYLOR: The whole idea of a national information policy is also something that's been talked about for quite a while.

MR. WYATT: This came up very strongly during the Carter admin istration when we thought we had some real opportunity but basically got nowhere. NCLIS gave us no support. A national information policy devised at that time would have been revised greatly by now anyway. The U.S. needs all sorts of governmental policies, and not only on information. Our chance of getting it is really a daunting proposition.

MS. TAYLOR: I also think we were ambivalent though about whether we really wanted it. As I recall, the conversations questioned that if there were a national information policy, would we really want the government setting it. The idea was that it should evolve.

MS. NANCY BAKER: That was discussed this morning on the Committee on Access to Information Resources, which recommended an evolving network and no formal national policy. There was no disagreement with that.

MS. CLINE: So we don't lose track of what Paula Kaufman said, the reason for those pilot projects, and we pushed very hard as an academic community to bring some of those forward, was so we could understand in greater detail what some of the issues would be and how we could extend the applications. Whether the government intentionally bungled the experiments or whether it simply was too much, too soon and the wrong venue—we still are lacking much valid experience to know how we would want to provide a certain amount of guidance.

MS. TAYLOR: That's true.

MR. WYATT: There is one more thing to be said about national policy. The lack of national policy is in itself a certain kind of policy, but we've had certain kinds of policies existing for over a hundred years now. Certainly the depository program itself is, in a sense, a national policy about information and access to government information. We can say that there may be some area if we could pick the shots and really focus on where we might possibly have some chance for success. This might possibly be one of them.

MS. TAYLOR: We just had an inspection at Brown a few months ago, and you're right, they are very, very insistent on making sure that you're really open to the public. And we're a library that, because of security concerns, checks IDs at the door. The inspectors really don't like that because they thought it might discourage people from coming in. And yet the irony is that if people do get in, they're not getting access to information in this present situation. So we do need to do more to make that clear to the inspectors.

MR. DAVIS: I'm struck by the absence in our discussion so far of some of those major themes that have come out of the White House conference. These are some issues that I thought we were going to be trying to get at as we look at our competitiveness, economic development, and some other issues. It seems to me that certainly the government information figures very strongly in that. So there

is a platform here to (if not to go with the information policy) maybe to reopen and rethink some of the issues.

MS. TAYLOR: And to make the analogy stronger between information and competitiveness. Any other ideas or comments on cooperation among ourselves in this? One thing I certainly heard emerge was that we should all be more active in terms of talking to our own congressional delegations and making them aware of our concerns about this. I would think that there would be a role for ARL there through the normal legislative support. In other words, good examples, sample letters, sharing letters that other folks had done—the kind of thing we do on some other issues.

MS. VON WAHLDE: We do respond to many surveys and that may be a good approach. I don't want to completely knock it. But are there other mechanisms in which some of that information is already being communicated that we could tap into? Maybe people are already exchanging that information and we just don't know how to get it.

MS. TAYLOR: The ways are mysterious to some of us, I have to admit.

MS. WERNER: I have vague memories that there are some very active bulletin boards among the government document librarians. We can probably get at some of this information more informally through them.

MS. TAYLOR: We need to find the right person to take the leadership role there, and that's something we can continue to talk about in our committee.

MS. VON WAHLDE: Then that information about these good examples needs to be transmitted throughout ARL in some fashion.

MS. TAYLOR: I thought Paula's comment about the library that spent $5,000 to develop this software is very interesting. We'd probably like to know who that was and why they had to do that.

MS. CLINE: Each one of us has probably spent much more than $5,000 in staff frustration and initial development. As we sit here, the meter's running, particularly on the Census project.

MS. BRYNTESON: I'd like to go out on a limb and suggest to ARL that maybe the Association needs to consider having an office that we pay for. From my point of view, ARL is the best bargain in town for what it provides for dues. What Ann has done with serial publishing and what Prue is doing with legislation are phenomenally successful. And I don't see how they can do more and take on government information, which ultimately I see as an ARL issue. I imagine that 100 percent of our institutions (American institutions) are GPO depositories. At the next level down we're probably very high in depositories, maybe 80, 90 percent. And then I believe there are probably quite a few libraries that are maybe 40, 50 percent, and then little baby libraries that are 2 and 3 percent. It is the ARL community that is our big selectors, and service providers. I can see this office becoming almost like CIP—going from publisher to publisher, from office to office, explaining the copyright materials, explaining what the dissemination responsibility is—educating. This group's purpose is of real service, and ARL is best qualified and very well positioned to do these things.

MS. CLINE: I was at a meeting last week where I listened to a speaker from OMB Watch; they have taken a position as well with certain agencies. The speaker was talking about some good and bad experiences. One experience was that Congress, after much badgering, spent several million dollars to come out with software that turned out to be terrible. OMB Watch got so angry about it they bought them out for several thousand dollars and convinced the agency to work with them. In many cases, it's ignorance within the industry that the agencies themselves are trying to deal with, and we should look at some kind of partnership.

MS. TAYLOR: Indeed. Any more thoughts on cooperative activities or on where ARL should focus its efforts?

MS. VON WAHLDE: Gloria and I had a question about the GIS. When is this to start, or are you looking for people to be involved? It's not clear to me what the status is.

MS. TAYLOR: We are, I understand, looking for people to be involved. Prue, can you give a little background? .

MS. ADLER: This is something for which we are checking the level of interest within ARL. We have been approached by a GIS company that has asked us to give them a proposal; they will give us site licenses and some training to get an education process going in the libraries. It is for the Depository Library Program. It is not exclusive to ARL. The notion is to do it regionally and through different kinds of libraries within and outside the system.

We feel that we have to start small because we couldn't handle it otherwise, but that it would grow depending on what we learned as the project went on. In part, this is being put out to see what the interest level is in terms of people willing to commit time, equipment, staff, and resources to training, and to get this kind of literacy project going, and to generally show the value of the depository program. It is to get a handle on the type of product in the system and to show what the system should be and could be in our libraries. We are looking for that interest and then we will formally submit a proposal.

MS. TAYLOR: We could have a show of hands expressing tentative interest. (There was a show of hands.)

MS. TAYLOR: Terrific. I presume at a certain point ARL will do something on a more formal basis in terms of determining members who would like to participate. Keep in mind, however, this is not a free lunch. You are expected to contribute a good deal of staff time.

MR. DAVIS: Would it be useful or worthwhile to have a SPEC flyer on this particular topic?

MS. TAYLOR: I think something of that nature would be useful. We are sort of stumbling around here with the idea of a survey or something. We found that when we talked about this in the committee, we lacked certain information about the role ARL libraries play in the depository program, and that there may be more ways to get that information than through a survey. But we also lack information about all our individual responses to this. Sharing some information on that would be useful. This whole issue of levels of service is something I would like to know more about. In other words, how are your documents staffs addressing this need for very intense help for some users as opposed to the more standard type of reference assistance?

MS. WELCH: As luck would have it, we are planning to have a staff member from Penn State conduct a survey through the SPEC program on processing government documents. But Prue had mentioned to me about a month ago when we were working with the folks on a preliminary draft that there might be an interest in broadening the scope. This might be an opportunity to incorporate the kinds of questions that you're asking today in this survey, broaden it a bit, and possibly get not only a SPEC kit and flyer, but also an occasional paper or the beginnings of the yellow briefing package that could be used to address our needs within other audiences. If that would be desirable we could certainly work with the staff at Penn State and broaden that survey.

MS. TAYLOR: I have much less trouble responding to ARL surveys than I do to the generic ones that come through the mail. I feel that the ARL surveys result in productive things that I can use. That's not always true with other surveys. So I'm glad you agree to do that. I would like to ask the group about the issue of where ARL should focus its lobbying efforts. One question we need to address is the GPO bill that ALA has already expressed support for. This is the idea of encouraging GPO to provide a user-friendly kind of interface that would serve as a "window" to various kinds of government information in electronic form. This is something on which ARL needs to take a position. Do we need to follow that issue closely and pursue it? Prue, do you want to take a shot at mentioning it again and explaining it better than I did?

MS. ADLER: WINDO is a concept in a bill in the House that Representative Rose (D— N.C.) introduced. It seems to provide comparable access to selected online files as there is in print. It is a notion of providing a form for access to electronic government data just as there is for private data. There hasn't been any movement on the bill. It's pretty recent, but it is an idea that ARL has advocated for years. If there are any problems with it, they have to be worked through. But it's the notion of providing public access regardless of the format. It would be a question of how that fits in with getting GPO to disseminate via the agencies' usable files, files that have some kind of manipulation that doesn't land in your library.

MS. TAYLOR: One is beginning to see more references to the idea in various kinds of publications, and if you haven't yet seen it, I'm sure you will. Are we interested in supporting the idea of federal standards for electronic products? Do we try to encourage the government to require all agencies to use standardized software or standardized approaches to their databases? Is this something that we should pursue?

MS. BENGTSON: When you say standardized, do you mean requiring each agency to use the same software or requiring agencies to use standard software?

MS. TAYLOR: Standard software. And it might, in fact, be more than one package, because, after all, not every software is applicable to every PC.

MR. KOBULNICKY: I'd rather see a policy drive in the form of access and not necessarily software. If you phrase it in a policy context, then you imply that there has to be some standardization of software, but you also don't focus on just standardizing software. You involve other things like new financing.

MS. TAYLOR: Right. There are other considerations as well. Any other things that you think our committee should be tackling in this regard or that we should have ARL focus on?

MR. DAVIS: I hope we don't lose sight of Susan's recommendation, because I certainly would support that. I don't know how we get larger or broader consensus on that kind of an idea.

MS. TAYLOR: One of the issues associated with a permanent secretariat or office on this topic is how much it would cost, what it would do to the annual dues, and whether the membership thinks that this is still worthwhile. We would probably need to talk more about what we would want this individual to do and so forth and so on, but it certainly is something we can explore.

MS. VON WAHLDE: Many products are coming in CD-ROM format. I'm wondering what our approach might be toward seeing the Coalition for Networked Information as another vehicle that might deal with this. Some of this could be accessible through the network as opposed to only on the stand-alone local product. It may be that the computing side is also unfamiliar with many of the issues and it would not be able to assume to start to educate us.

MS. TAYLOR: Good point. In fact, I'm glad you mentioned that because that had come up yesterday. The idea of making the Coalition more aware of some of these things is good.

MS. VON WAHLDE: If I remember correctly, Paul Peters said that a working group on government information has been discussed.

MS. TAYLOR: That's right.

MS. ADLER: Since I have an opportunity to lobby, I will take it that one of the things to get us closer would be a letter to every member of your state delegation asking to get GPO on the Internet. I have been working on that for months and have not been successful. It's close to being in their budget, but that's no sure thing. A letter to members of Congress saying this would be important will give notice to agencies that they could be at GPO, get their data out, and GPO could get the data to you. These letters would be critical. I would encourage and certainly welcome you to do that.

MS. TAYLOR: This comment may not be completely relevant, but it reminds me of one idea that has been tossed around for a little while. It is the idea of having an electronic conference for ARL directors that could be used not only among ourselves for the exchange of information, but as a hotline for ARL to notify us of important information. I was going to suggest that Prue send out an E-mail message reminding people to write those letters, but then I remembered that we are not all accessible by E-mail.

MR. WEBSTER: We're getting very close. In fact, Craig, our systems specialist, assures us that the communications computer will be available on the Internet soon.

MR. SUMMERHILL: We're already on the Internet. And we are defining the accounts and providing access for people to get into the machine.

MS. TAYLOR: I think that's going to be increasingly more important as these issues come up. And also, things are so tough out there budgetwise that we all need one another to talk to. It may help our morale and our mental state.

GENERAL PROGRAM SESSION III

STRATEGIC ISSUES FORUM REPORTS

MR. CURLEY: This is the Town Meeting section of our program, a form of government well known in New England, guaranteed to produce sound and fury, but we will show that an ARL town meeting can be something productive and efficient.

We had six program sessions, each of which produced a report that will come before us. I will call for a report on each of the subject areas. As time permits, we will have a few questions.

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Management of Research Library Resources

MS. BUTLER: The small discussion group was a particularly helpful way of finding out good ideas from the audience.

In today's complex world, library directors must feel like Woody Allen in his speech to a class of graduates when he said, "We stand at a crossroads. One road leads to despair and utter hopelessness, the other road to total extinction. Let us hope we have the wisdom to make the right choice."

Our task yesterday was to examine the variety of issues that keep us up at night, and to suggest to ARL actions that we might take collectively to address some of those issues, to provide advice to the Management Committee, and to identify other topics that were not covered by the survey. I'm going to summarize very briefly some good ideas that came out of the discussion.

There were general concerns about making cooperative resource sharing endeavors more cost effective. Some of the ideas that were generated included: the development of a cost model; and a set of acceptable cost elements or standards that members could use to analyze and cost out their resource sharing activities and demonstrate their value to the research community. There was general agreement in several groups that such a collective approach would not only be beneficial individually, but would provide some comparability.

Also ARL could be very useful in producing comparative measures to be used for local case making. ARL needs to assist members in identifying effective measures and a program budget model that addresses new budgetary directions such as access, preservation, and staff training. The emphasis should be on helping us to think collectively about these issues so we are all considering the same elements even though there will be a great deal of variation at the local level.

Of course ARL can continue to lobby the federal government and work to establish national priorities for cooperative programs. It can influence the Council on Library Resource, RLG, and other national interests to take action that encourages resource sharing and can inform members of what has worked in other organizations. That's the theme that came up repeatedly in the discussion groups—the real value of learning what works and what is being attempted at other institutions.

Another group felt that ARL can continue to sponsor activities and programs such as the Coalition and the OMS. In fact those examples were mentioned in several meetings as being very useful. In other words, ARL is on the right track and is doing good things. Of course, the only issue is in addition to doing those things, more still needs to be done.

Some felt that an ARL director's list, an E-mail bulletin board or some way for rapid exchange of innovative ideas was long overdue.

An important question was raised by one group: Do our financial commitments correspond with our newer program needs? In many cases, our allocations are historically determined. Are there effective ways that some libraries have addressed those program needs and could we learn from one another?

Another group cautioned that ARL can't tackle everything that keeps us awake at night. One of ARL's most important functions is lobbying for more federal and foundation support for research libraries. Keep up the good work.

On performance concerns, and many groups spent a great deal of time on this, the critical issue that drew the most attention was finding ways to demonstrate library effectiveness. One group questioned whether there was an assumption that we believe that our libraries are performing effectively. Others accepted that idea as a given, and were more concerned that output measures were not enough, and asked how we could move from data gathering to research. Could ARL provide briefings for the directors and library staff on alternatives to output measures? Could we learn more about sampling techniques that have statistical validity?

Again, ARL plays a role in helping directors understand and define what access means to all of us and what it should be. Access is a very general

term, and it means different things to different people. Could we discuss and clarify the variety of ways we use that word?

One group stated that libraries need to link assessment of library adequacy to institutional accreditation needs, and ARL could help define that kind of an assessment effort on the national scene.

We need standard definitions for such terms as automated systems. We need examples of a transaction. A number of people discussing that issue felt that the kind of data we now collect about costs associated with automation is not particularly helpful because there is simply too much variation. Again, we need to look at budget and performance, determining what we do to provide basic library services and what it costs, and what we do because of institutional choice. We need to look at budget with that kind of dual vision.

Electronic systems provide much management data on performance—are member libraries looking at this information and using it in interesting ways? The Management Committee could review the ACRL performance measures and determine their usefulness and relevance to research libraries.

Is there a role for ARL in articulating the need for libraries to be an integral part of an institutional plan? ARL could compile information on what member libraries are doing to downsize serials collections, for example, and could have one of the bibliographic utilities among a cancellation data base to begin to assess the impact of the collective cancellations of serials across the country on the research community.

Another group commented that ARL statistics are based in the 1960s and that members need to make quick profiles of peer group members rather than broad views of the entire Association. That group suggested that programmatic and descriptive information was more important for their purposes than simply the quantitative listing. I'll leave the rest of the statistics issues to the later discussion.

On the issue of human resources, one group stressed that they saw this issue as fundamental to all the other issues in the survey. There were some diverse opinions, but there was a strong endorsement for the development of the total quality management workshops that were discussed in the OMS presentation.

One group asked how we can help our staff to have access to the wider visions and changing environments in higher education. Leadership in managing change is critical to success, and there was a general underscoring of the importance of the kind of training that OMS has provided. ARL could establish an information exchange, listing who is doing what in staff training so that we might pool our resources to accomplish similar tasks in disparate locations.

Could ARL provide survey information on what members are spending to support training and development and what members are doing that they are proud of and how these activities are funded? Again, the general theme was that we want to know more specifics about what our colleagues are doing.

ARL needs to continue to emphasize leadership development, develop new training programs focused on the larger issues (not on the specific task competencies which must be done at a local level), and develop SPEC kit-like packages for middle management staffs or below on the large issues of strategic planning including: environmental scans, impact of change, and key technical issues. There was a general interest in leadership and vision, not simply at the level of top administration.

On the issue of management of technology, one group asked if we manage technology, or if technology manages us and we simply react to change?

There was a suggestion that ARL might be able to identify directions and suggest ideas and share that information with members. They also suggested that the Coalition for a Networked Community might assist in this endeavor. Some people recognize that that is indeed what is happening.

Libraries need to sell the concept of budgeting for change and technology. The Management Committee might survey members and find out information about life cycles and replacement schedules to help member libraries in budget and planning.

We need a SPEC survey on computing services, library services, and patterns of organization. Again, many members would find that comparative information helpful. One group spent some time talking about the role of research libraries and asked if there was a role for research libraries in the 21st century. Could ARL help members define and articulate what that role might be even where a vision of the future remains cloudy?

On the issue of organizational development, there was general feeling that the OMS training and recent publications on staff and the SPEC kits were right on target. There were no particular needs expressed that weren't being met, although one group suggested that it might be useful to look at this survey on what keeps directors awake at night again in two years to see the degree to which things have changed.

Most groups did not get to the issue of library education because it was the last issue in the survey. But the few comments that were made expressed a feeling of pessimism for the ability of library schools to change quickly or sufficiently enough to respond to the needs of research libraries.

And finally, there were suggestions for areas of concern not covered in the survey. One was on user performance. Could ARL assist members to develop tools to measure and analyze user performance and assist libraries in developing user training that responds to the results of the research? Here we are talking about the kinds of things that automated technology allows us to discover about user failure of search strategies and so on.

Other issues discussed that were not covered on the survey but are very closely related were: the relationships between the library and other information providers, including computing centers, publishers, scholarly societies, and so on; and political relationships with faculty administration on campus as well as the relationship of the library to the changing and evolving academic programs.

Another area one group discussed that was not covered in the survey was assistance in justifying large capital expenditures.

MR. CURLEY: As a member of the Management Committee, I can say you did a terrific job of squeezing an enormous amount of information into this record, and we are grateful.

Preservation of Research Library Resources

MR. STUDER: The title of the program was "Funding Preservation Programs in ARL Libraries: Strategies for the '90s." The more apt one might have been "What To Do and Think in Hard Times," because that was the general program tone.

We heard from four panelists and then had a very brief discussion. Paul Willis, who recently completed the preservation study, spoke as a library director challenged with implementing a preservation program. Scott Bennett spoke on strategies for increasing productivity, and Joe Rosenthal spoke on strategies for reducing the preservation budget from the point of view of a library that has sustained over a million dollars in decreased funding over the past couple of years. Ken Harris then filled us in on the deacidification plans at the Library of Congress. I'll briefly summarize the points and suggestions that were made by the panelists.

The ARL Preservation Self-Study completed at the University of Kentucky this year helped to focus and direct a program that had grown incrementally over a dozen years through the work and recommendation of the standing Preservation Committee. The preservation officer and the funds which preservation activities are allocated are supported with monies diverted from the elimination of other positions and the acquisition budget.

The Preservation Self-Study provides a long-range plan to follow in small steps as resources allow. Student help and friends of libraries volunteers have made a reasonably good contribution. The University of Kentucky is a good case study, demonstrating that with commitment, persistence, and the structure that the self-study provides, much can be done with very modest resources. I have combined the various observations, comments, and suggestions that Scott and Joe made. They provided some context that might be described as the imperative of down-sizing—having to work smarter and do more with less—a perennial reality these days.

Again, we must be just as concerned with productivity issues in preservation as in any other library activity. Cost consciousness must pervade all program decisions and operations. Think less of the number of preservation treatments accomplished and more of how the program components serve users. Make the program user-needs-oriented. A preservation program should reflect the operation of a living, dynamic library, not a museum.

Be selective. Everything does not need to be saved. Formulate selection principles and be guided by them. Employ less costly preventive measures, for example, accomplished by cost-effective student labor and things that preclude more expensive treatments later on. Leave untreated what can be done tomorrow. Make time an ally rather than an enemy. Many brittle items can sit on the shelves for decades before they literally disintegrate.

We must shift from a handicraft cottage industry approach to a production mentality—fit the treatment to the need. For example, don't bind at all if possible. Don't bind Class A if a cheaper binding will do. Make decisions according to artifactual value and perceived use of materials. Employ mass deacidification as one component in the overall preservation program. Reformatting is very costly and should be done only when necessary and enhanced access drives the decision. Capital funds are perhaps easier to come by in areas like climate control improvements which have a positive effect on preservation. Employ remote storage as a preservation strategy for infrequently used material. Engage in cooperative ventures on

a broader scale on several levels. Share in collection preservation targets. Share expertise. Share personnel. Even share equipment.

Turning to the Library of Congress and what Ken Harris had to tell us, as most of you know, LC issued an RFP about a year ago and went through the evaluation process, only to decide not to award a contract. LC has devoted major resources to mass deacidification over the past 18 years. The RFP did not result in a contract award. While LC was disappointed, it was not dissuaded. They remain optimistic and will move forward, perhaps in collaboration with other interested libraries from this group.

LC will make a proposal to Congress in late November concerning future actions, options, and directions for their mass deacidification program. The RFP addressed three major concerns: toxicology, both with reference to impact on humans and the environment; technology, that is, does the process completely and uniformly deacidify with minimal damage levels to materials; and vendor qualifications. Will the vendors have a business profile that suggests success in entering this venture?

Test samples of 500 books were tested by three vendors: Wei'To, FMC, and Akzo. The texts were analyzed by the Institute for Paper Science and Technology (IPST) in Atlanta. The test results are available now in four volumes of about 350 pages, mostly graphs and charts. It does take some interpretation. There was a Source Selection Evaluation Board that helped evaluate the responses to the RFP and the IPST analysis, and I was a secret member of that board, and it now can be told that I really did take part. There were problems with the demonstration sets. One process met virtually all the technical requirements. Two had problems with complete and uniform deacidification and sufficient alkaline reserve. To say only those few things is to be trivial in terms of the volume of test results, but that issue is absolutely key to whether the process works.

In the discussion group, Barbara Smith raised the issue of her perception that the pool of experienced preservation personnel is very shallow. An observation was made that this is still mostly an apprentice-based education and training process. George Farr was in our group and reminded us that with the availability of NEH funding for education and training of preservation professionals, except for the support of the Columbia program, which we all know is going to disappear, George has yet to receive one request for this available funding. He finds this both puzzling and disconcerting.

The Commission on Preservation and Access is obviously very concerned with this educational training program. Patricia Battin mentioned the need to distinguish between the technical specialist and the preservation administrator, who are seen as two very different types of people requiring different educational processes. Jan Merrill-Oldham reminded us that for the short-term we need to work with the mass deacidification vendors within the recognized current limitations of their process.

And although it did not come up in this session, I want to mention that the Committee is recommending to the Board the formation of a "steering committee" on mass deacidification as adjunct to the Preservation Committee. There will be a core of people from the current Preservation Committee who will take leadership roles. Whether the ARL Board approves of this venture is, of course, key to whether anything further happens. If they do, those of you who are active in any way or are planning to become involved in mass deacidification will be invited to become part of a larger group that is going to pursue an agenda, which will include at least some R&D components; the new group will work with vendors to try to resolve some of the problem issues that remain in the treatment process.

A very important educational component is to disseminate information and act as a clearinghouse on mass deacidification facts and issues. It is also important to work on the foundation of funding an actual facility, which is obviously a large obstacle here. By doing so, we can cut the unit cost of mass deacidification virtually in half if we can manage to raise funds at that level.

I think that's all. I can say a little more about the LC issue if anybody wants to ask about that. But Ken Harris would be the authority on that, and he is not here.

MR. CURLEY: Could you say more about the LC issue?

MR. STUDER: A specific question?

MS. KAUFMAN: Which process worked?

MR. STUDER: I don't know if I can say that. The test data are going to be available, and I will say, on Ken's behalf, that he wants everyone who can to use these four volumes meaningfully to have them. If you just write to him, phone him, leave a message, he will send them to you. They cost about $60 to reproduce, so don't ask for them if you don't want them. In that data, you will see that the FMC process and the Wei'To process, to some degree, had some significant shortcomings in the uniformity and completeness of the deacidification of the treated materials. And by and large, all of the vendors agreed to have the information dissemi-

nated. That's the only way that it was possible for LC to publish this information. It needs some interpretation. But users can be instructed on how to read and interpret the information. Some of the graphs are self-defining; you don't need to interpret the fact that alkaline reserve under artificial aging declines to zero over 35 years. That's apparent from the graph. There are problems. The DEZ process particularly doesn't like SE-LIN labels. It tends to ruin them. That's a critical issue, and it has to be worked out. The text books treated all had very noxious odors according to the sniffer panel. There really was a sniffer panel, and it gave them all headaches as well.

We in the CIC, the Big Ten, now including Penn State plus the University of Chicago, also engaged in a year-long study. We have sent about six or seven hundred volumes each to FMC and to Akzo. There have been odor problems. The ones that we have sent from Ohio State don't seem to have any odor much different from any book that you pick up in the stacks and smell. Books do have peculiar and different kinds of odors.

Some inks tend to run and feather in a non-aqueous fluid process, which is something of a significant issue. Cockling occurs sometimes. Some adhesives are dissolved. The text block comes apart from the binding in some cases. I am not saying what percentage of incidents any one of these processes exhibited except that the odor was somewhat pervasive. Overall, their citation of problems sounds very condemnatory, but when you're serious about getting into this, you see that most of the major problems are resolvable.

There is going to be some degree of physical status alteration. We hope it will be mostly invisible, but if you're interested in saving the content and if you're not concerned that given items have artifactual value, you're going to make paper that might last less than 50 years endure for 300 years or longer, and that does a lot to recommend the process if you believe in paper as an archival medium. Some of us do.

Johns Hopkins has had a contract now for some time and is doing business with Akzo. Harvard has a contract with Akzo as far as I know. If Richard De Gennaro is still here, he might confirm or deny that. I think it's about at the $75,000 per year level.

We at Ohio State, with a very modest amount of money, are going to start treating some things—books without call labels on them, etc. Connecticut is treating some things, and I'm sure there are others that I'm forgetting. It is a critical time in this industry, and what LC does in the short term is very important.

In the "mass" sense of large scale treatment, there really are only two players in this field. They belong to major corporations and represent minute parts of the corporation's activity. They have been around for a good while. The library communities have not responded in any significant way. The collective business that Akzo is doing in no way supports the plant that's in operation, and the prices they are charging are subsidy prices.

Something is going to have to change. The companies are going to have to perceive a change in the probabilities in the near term. I hope that what this group is proposing to the Board will be evidence of the seriousness of a subgroup to the vendor community.

MS. MERRILL-OLDHAM: It might be worth talking about the DEZ process because DEZ is in the process that is proving to be very effective in uniformity of deacidification and distribution of buffers in the paper. The toxicological tests done on the DEZ process were extremely thorough.

MR. STUDER: They were funded by the Library of Congress.

MS. MERRILL-OLDHAM: And the results are extremely encouraging both in terms of human safety and environmental impact.

MR. GETZ: Why didn't LC move with the DEZ process?

MR. STUDER: I wish Ken were here. The LC news release was a little obscure. The conference on mass deacidification in Andover about a month ago had some materials there from the major vendors, and Dick Miller of Akzo had a letter there for the attendants. The conference was sponsored by NEDCC and ARL. There was an invitational conference representing about ten of us.

Dick Miller suggested that it was a business decision. If I'm saying something I shouldn't be, it's Ken's fault for not being here.

The RFP required that the vendors be prepared to treat a million volumes a year, if not the first year, at least within a very short time. It allowed, through some imprecision of language, for a bid of less than that to be acceptable, and still be within the parameters of a legitimate response. Akzo said they would only do 100,000 per year. What this implied was that they were not willing, at that stage, to say that they were going to invest millions in a plant without knowing who was going to use that plant with any guarantee; and the Library of Congress had and still has only $5 million in the bank to cover one year's worth of mass deacidification activity without unit pricing being

known. LC gets their money one year at a time. I believe that from the point of view of the Source Selection Evaluation Board, we thought LC was prepared to begin negotiating with Akzo to work out a schedule for solving these problems and to move ahead and begin to treat materials that obviously had little to any risk. LC believed that Akzo would, having been selected so to speak, back off of this limitation of 100,000 volumes a year. But they were not given a guarantee of more than a year at a time, which makes it very difficult to obtain any venture capital to build a facility. In that sense, it was a failure of a business proposition, but we have to believe that's negotiable, too. The Library of Congress and those who were at the Andover conference left feeling that there was a consensus to go forward on this. I believe the Library of Congress now wants to move forward with other libraries, and that may go as far as some type of collaborative effort to seek funding for a plan. They are going to be gathering information and trying to come to some tentative positions on issues so they can address Congress in late November. I think Mr. Billington will convey that information, but clearly whatever is known in the way of proposals and suggested options will be prepared at the preservation office level in LC.

MR. CURLEY: Thank you, Bill, for an excellent report. The best report of the day will receive the ARL sniffer award! Thank you for that term.

I feel some guilt in having to move so quickly from one topic to another, but you realize it is part of the process. Each committee will be refining its mission, objectives, and its priorities on the basis of these reports. We will do everything we can to make this information widely available, and of course the Board and the staff itself will then review those items referred to us from the committees.

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Access to Information Resources

MS. EATON: All of you received the white paper from the Committee on Access to Information Resources in advance of this meeting (see page 51). As you know, that Committee's role has changed from a focus on bibliographic control to a broader role on information access. Part of our concern is that it is such a broad role; we wanted to identify what you thought would be the most important issues for the next five years. We highlighted in the paper seven areas for discussion. We had a very good turnout for the discussion, and I think some very clear direction came from it. I will share it with you this morning.

The first area had to do with the changing bibliographic network. The general tone of the discussion was that the Committee should work on the broader vision for libraries and let the relationships among the various networks, whether national or regional, flow from that definition of the environment. We need to get back to the values and the philosophical quest of sharing information, both on a broad scale and in more defined terms such as what levels of data should reside where, membership responsibilities (e.g, adding information to the national databases), et cetera.

Participants also stressed that we have many common interests that bridge many groups and that we need coalitions and cooperative endeavors with both not-for-profit and for-profit organizations.

Looking at the emergence of concerns beyond bibliographic data, we were again asked to clarify values of electronic resource sharing before focusing on techniques. Practical outcomes and applications should not be ignored.

We should stress linkages over keeping large central databases that become complex as they grow, and we should emphasize routing mechanisms as we work in this area.

There was also a strong recommendation that publishers take on more responsibility for adding value and that we try to get libraries out of adding value to products that come from publishers.

As we looked at the changes in telecommunications networks, there was a sense that the choice of private dedicated networks versus public networks (Internet, regional and state networks, et cetera), is not an either/or situation. It will be market driven. It will be dependent on funding resources, and we should be looking at the various configurations that might be desirable. We should articulate values and objectives and let configurations flow from that. As we work on NREN, we should be looking at it as a linking mechanism stressing protocols and connectivity.

As we talked about the challenges and threats from local and regional networks, participants went back to the theme that we should look at the overarching objectives and principles such as the fact that as we make local decisions that have cost implications, local savings should not be at the expense of supporting the national good.

There was a suggestion that we make the contribution of our records to a national database a prerequisite for ARL membership. There was an observation that it is easier to have and maintain a central database of national records than it is to implement a distributed network. There were some conflicting views on national versus distributed databases.

We talked about the changing roles of the national libraries, and the sense was that they should take a leadership role in the changing environment, but that should include a great deal of discussion with constituent groups such as ARL. We should view research libraries collectively as the national collection, and stress that the national libraries do not stand alone. There was some agreement that many of us have major collections and in many ways function de facto as national libraries, and perhaps there should be more discussion of this in the future.

On the new Library of Congress technology initiative, there was a recommendation that LC should not replicate or duplicate what exists in the rest of our collections, that the stress should be on linking resources through networking.

We looked at document delivery and print on demand as an evolving area of importance. The feeling was that we must acknowledge that we need to pay royalties and move on rather than be stuck on copyright. We need collection sharing as we move into document delivery—a strong sentiment that goes back to one of the earlier reports from the management group that we need alternative economic models of resource sharing, and any analysis of document delivery should include the commercial sector.

There were strong sentiments that interlibrary loan, as we operate it now, is an old design and is very labor intensive. We need to look at technology to help make that operation more efficient as interlibrary loan moves into document delivery with a much wider role and with much more demand.

Another suggestion was that we think about a national imaging project to build a national database of bit mapped images, and that some of the responsibility for current materials might fall to the commercial sector because of the intellectual property rights issue. There was a suggestion that we need to educate our administrations about the costs as well as the savings of resource sharing, and that they are quite naive about those issues.

When we talked about changing ethics, the same sentiment you have already heard came out again, namely, that we really do need to reconceptualize the basic understandings and assumptions upon which electronic resource sharing is based and let many things flow from that redefinition.

The final area that we discussed had to do with the Network Advisory Committee's earlier recommendations that the national database be distributed, national networks be evolutionary, and that there not be an effort for a federally defined network. The discussion basically reaffirmed the NAC statement as the direction we should be supporting.

At the end of the discussion, we asked the group to help us prioritize what the Committee should be focusing on. There was uniform agreement that the rearticulation of values, including definitions (because we use some of these definitions rather loosely) should be a first priority, and that reconceptualizing document delivery should be a second priority.

I might add that the Library of Congress Network Advisory Committee will be meeting in December to talk about the role of the national libraries and that we will have two ARL representatives at that meeting.

Scholarly Communication

MS. HOGAN: The Committee invited two of the players in the scholarly communication chain to talk to us. They were Richard De Bacher from the Southern Illinois University Press, who is also Chair of the Association of American University Presses Library Committee, and Michael Gannon, Director of Distribution Services of Engineering Information, Inc., the index abstracting company who brings us *Engineering Index* in print and *Compendex* online.

Richard De Bacher talked about the development of the Library Committee within the Association of American University Presses. It did not exist in the '60s and the '70s when money was rolling in and we quite blindly bought most of the output of the university presses. However, that changed in the '80s as the number of volumes of total research libraries diminished. A number of presses felt that taking a look at that partnership and that constituency was important. He challenged us that if we believe that university-based ownership of information created in the university is, in fact, an idea we should explore, then working with AAUP in a partnership to explore communication and distribution mechanisms is a place to start.

While we may not be quite ready for a meeting between the ARL and AAUP membership, there are, in fact, movements to have small meetings. An example is the meeting that CIC directors are planning with the regional members of AAUP in the spring. Mr. De Bacher felt that these types of meetings were important and suggested projects on a regional level.

He also challenged us to think about what we are doing in cooperation with the commercial publishers that might be done in cooperation with

University Press publishers. For example, many of our reference librarians work closely with Gale Research to identify potential reference books. In fact many of them spend their time working on and then producing those books, which the publishers then sell back to us at high prices. Mr. De Bacher suggested that we should take those ideas to university presses who might be very willing to take on those projects.

Afterwards, we discussed the libraries that are working with their local press. For example, Columbia Library and the Columbia University Press are putting the Columbia publications on the university network.

Michael Gannon talked about the document delivery system that his company is going to put in place using the Internet. Engineering Information, Inc. subscribes to about 3,000 titles each year. They decided to work jointly with publishers to scan and store articles from these journals, and approval has thus far been received from three different companies (one commercial and two societies) to scan and store ten years worth of the journal articles. When a library requests a document, the turnaround can be hours instead of days. They are going to work with the Copyright Clearance Center when scanning current items. Again, for a price they will produce them and send them over the Internet.

Engineering Information, Inc. is still working on a pricing structure, but they have considered the possibility of adding the service to the price of the Compendex CD ROM subscription.

The discussion brought questions about the technology, about where the items could be sent, and finally about price and a plea to bring the price down. Mr. Gannon reminded us that there are major players beginning to come into document delivery, and that they are all exploring the cost ramifications. We have Faxon and UMI and now EI. He sees a major shift in the players as we experiment with the technology.

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Research Collections

MR. BILLINGS: Many of the Association's activities over the past few days have centered on the establishment of commonly shared values, which ARL as an organization can build into its committee agendas for the next year.

Yesterday at the program session on research collections participants raised, by means of a survey form, the values that influence and guide ARL member directors as they approach collection development. Each of you should have a copy of that form (see page 81), and if you haven't completed it, it's well worth doing. Small groups discussed comparative rankings by assigning values, and some sense of priorities emerged in the discussions following the exercise.

It should not be surprising that members were torn in their value assignments between local needs and needs of the larger research and scholarly process as it ties to collection development. It is also clear that the collection development process itself is being tugged at by traditional collection building concerns as well as by emerging new information technologies, opportunities, and challenges.

The issues assigned the highest priority value during the exercise yesterday included the development of an improved infrastructure to facilitate cooperative collection development and to facilitate information sharing among research libraries.

Access to, not ownership of materials was considered a paramount issue. But the maintenance of distinctive collections of national and international importance was also considered of major importance. Innovative approaches to meeting new needs associated with new formats was considered to be of major value.

There was virtually equal concern for maintaining collections to meet the local requirements of undergraduates, graduate students, and faculty.

Discussions suggested that the Committee attempt to articulate the assumptions that were assigned the highest value. It was recommended that the Committee attempt to identify demonstration programs that might address solutions to these matters of highest concern.

Finally, a number of participants commented that they intended to use the survey at their home institutions to assess the commonly held values shared by their selection staff and faculty constituents regarding collection development issues.

Is it possible that the values we pose here may not be the same as those of the fundamental stakeholders we have at home? It's rather interesting to think about the tension that exists between what we as library directors perceive to be values with respect to collection development and other issues, how we espouse those values when we come to a national forum like this, and when we go home and face the realities of our primary constituents' values.

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Information Policies

MS. TAYLOR: For many of us, government documents can be a mysterious area, and sometimes we don't pay attention to what goes on in the area as closely as we would like to. For that reason, it is also an area where major problems can arise and catch us by surprise. So the information policies forum discussed the growing problems that all libraries are facing as more and more government information is available in the electronic format. Federal data files, predominantly CD ROM format, are arriving in record numbers in the depositories, usually without adequate search software and little, if any, documentation.

Problems facing libraries with these information products and services provide some indication of what is ahead as more of our resources are available on electronic format. Following some rather telling discussions on what our government documents librarians are experiencing, the participants made several proposals on possible new approaches to managing this growing financial and excess problems.

A very immediate effect, and it hit some of us sooner than we were expecting, has been financial. There is already a need for new equipment, and for more space for the equipment. Training costs are highest. Each new datafile must be managed with little, if any, guidance from the issuing agency. Some of these files require use of a workstation for several hours, which is a problem if you happen to have only one work station in your documents area.

We know that libraries are developing software, documentation, and user guides themselves in order to deal with some of these materials.

There are ways to learn what other libraries are doing. The list is certainly one of them, but not all libraries have access to this list, particularly libraries outside ARL, and there really is not an organized exchange or sharing of the data. The extent to which it is shared depends on how active a particular government documents librarian may be in putting the information on the list.

ARL libraries constitute almost one-half of the depository libraries that collect and maintain all government information permanently. Many of our libraries act in a leadership role for other libraries dealing with federal information in our regions. How are these responsibilities stretched or strained with the new electronic products as services? Of course I don't need to tell this group that all of these additional demands are hitting us just as we are facing cuts in many areas and other very severe financial constraints. We can't deal with this problem simply by throwing money at it.

During the course of the session, Joe Boisse and Paula Kaufman provided information and experiences with census data, the famous TIGER files, and on the Department of Energy's pilot project. Both described the common problems they have had with staff training, access, and equipment problems. The irony is that the pilot programs were designed to evaluate how best to manage this transition to electronic format and ease the entry of the files into the depositories. In fact, there apparently has not been a great deal of valuation of them by the government, and there hasn't been feedback to many of the libraries, so they may not have functioned in the way they were hoped to.

Participants discussed the nature of a shared response or cooperative efforts and what the most feasible and beneficial response would be.

It was noted that GPO has not been very aggressive nor supportive in providing assistance despite repeated complaints and suggested changes. Some sort of new response is needed before we are completely overwhelmed with the data that is increasingly inaccessible.

Suggestions included enlisting the help of a visiting program officer from one of our libraries to examine the following: a survey to learn what libraries are doing; costs; access; and equipment needs. What can we share among ourselves that has been developed by member libraries?

Should there be a forum or clearinghouse for exchange of software that libraries have developed? Should ARL work with the agencies and libraries to devise training programs? Should we develop through ARL a program for exchanging guidelines and policies on levels of service? Are there new models for providing services that we should be considering?

How should we educate our respective members of Congress on the problems that each library is facing and what this means in terms of information for its citizens?

Should we explore opportunities to develop partnerships with agencies to standardize software packages and to deal with the problems where they originate? That was the theme that came up several times—that ideally it would be best to deal with this problem at the source. In other words, we should work together to get the government to change its behavior. The likelihood of that happening quickly, however, was another theme that ran through the discussion.

Several people suggested that this is a very serious matter. In fact the whole issue of information policy is a serious enough matter that it may

merit another ARL office to focus on it in greater detail.

The remaining part of the session was devoted to discussion of the proposal for the GIS literacy project.

As one means of solving some of the problems noted previously, ARL staff have initiated discussions with a geographic information systems vendor. We are asking that the vendor donate software to a small number of libraries and provide appropriate training and documentation. In return, these libraries will become resource centers for these files and information. The proposal will be designed to assist depositories in providing access to this data in a restructured fashion that is available through the government. It will also point to other opportunities that may be available through ARL to meet this growing challenge.

It was mentioned that staff will develop a formal proposal to the vendor. We'll let you know how that proceeds.

Everyone felt that there were areas here where we could work through CNI on standardizing the software to deal with these files and influence the vendors. Even when software is being produced to work, for example, with the census files, there is a tremendous problem in terms of how user-friendly that software is, and much of it depends on the user being very familiar with the database or the software. As we know, many users are not.

It emerged that we as ARL directors need to know a good deal more about ARL libraries as depositories. What are we selecting? What is the range among us from full depositories to less than full, and what does that say about what ARL can do not only within itself, but for other libraries in the region?

It was again mentioned, and I'm glad that ARL staff are moving ahead on this, that the existence of a computerized conference for ARL directors would be a wonderful means of sharing information on issues of this nature and a wonderful means for ARL to communicate with us on issues requiring quick action. We are very anxious to see that conference become a reality, and we have encouraged Duane and company to pursue it enthusiastically once their new computer is fully functioning.

MR. CURLEY: Thank you, all of the committees and those of you who participated in the discussions. I certainly found the ones I attended to be interesting and worthy of our time. It has given the committees and the entire planning process of the Association a great deal to work with. This has been a meeting with a great deal of substance to it. The staff works very hard to put these conferences together, and I thank them for it. This one has gone quite nicely. I thank Duane and all of his staff for the very hard work they do preparing for these.

GENERAL PROGRAM SESSION III

FOUNDATION TRENDS

FOUNDATION TRENDS IN THE 1990s
Introduction

MR. CURLEY: Good morning. We are delighted to welcome you. The substance of today's program is to help us address foundation trends.

We would like to start with Richard Ekman. He was Secretary of the Andrew W. Mellon Foundation from 1982-1991, served on the staff of the Education Programs, and then as Director of the division of Research Programs. Before coming to NEH, he held administrative and faculty positions at Hiram College, the University of Massachusetts, and Howard University. Dr. Ekman's bachelor's, Master's, and doctoral, degrees in the history of American civilization are all from Harvard University. He served on may professional advisory boards in educational institutions and associations, including the Education Projects Advisory Committee of the Council of American Overseas Research Centers. We are very fortunate to have him with us.

Our next speaker is known to many of you. He is our colleague, David Penniman, President of the Council on Library Resources. Before joining the Council on Library Resources in 1991, Dr. Penniman served at AT&T Bell Laboratories as director of the Information Services Group, and prior to that, as Libraries and Information Systems Director. He established the Research Department at OCLC and served as OCLC's Vice President for Planning and Research. He was also at the Battelle Memorial Institute as Associate Manager for the Information Systems Section and is a Past President of the American Society of Information Sciences. He holds an undergraduate degree in engineering from the University of Illinois and a Ph.D. in behavioral science from Ohio State University.

Our third speaker is Loren Renz. She is Director of Research at the Foundation Center. She has held that position at the Center' New York Office for the past three years. She is responsible for tracking trends and monitoring long-term growth. Under her direction, the Center has launched a series of new reports on the impact of philanthropy in major or emerging subject areas. Prior to her appointment, she served as editor-in-chief of *The Foundation Directory, Source Book Profiles,* and other publications of the Foundation Center. She serves on many national committees on foundation giving on matters such as research and statistics and funding of projects for women's and minority groups. She holds an undergraduate degree from Georgetown University, and an MA from Hunter College of the City University of New York.

ANDREW W. MELLON FOUNDATION
Richard W. Ekman

MR. EKMAN: I'm pleased to be here today and to follow in the footsteps at the Andrew W. Mellon Foundation of Neil Rudenstine and Jim Morris, both of whom are known to many of you. The Foundation has long been a supporter of research libraries.

It's good to be with you today, too, because research libraries have usually spoken with a unified voice about their needs and priorities. You are well served by the ARL, the CLR, and the Commission on Preservation and Access. The reinforcement by these organizations of the priorities stated by one another is remarkable. No other sector of the academic and intellectual world seems to demonstrate quite as much consensus. For us at the Mellon Foundation, your clarity has been especially helpful when we've not been certain about the best approach. For example, with regard to book preservation—one of the few topics in the library world in which there appears to be sharp disagreement—we've not felt confident in giving single-minded support only to microfilming, deacidification, or digitization. Rather, we've supported projects that emphasize each of these three approaches, just as the ARL, the CLR, and the Commission on Preservation and Access have championed a multifaceted approach.

What we *have* insisted upon, just as you have, is that any library project that the Foundation supports be part of a regional or national effort in which cooperation plays an essential part. Whereas in most respects the Foundation has approached the world of higher education by encouraging, if you will, a kind of entrepreneurial and pluralistic approach, in the world of research libraries we believe the stakes are too high for such wasteful competition. Not only will scarce resources be squandered by needless duplication, but, even worse, an institution that moves on its own down the wrong path will detract from everyone else's efforts to create an effective system.

This theme of cooperation has led us to a variety of particular programmatic emphases. I want to mention today six of the Foundation's current activities that may be of interest to you. This report will necessarily be tentative, in part because I am new to the Foundation, but also because the Foundation is taking a fresh look at its efforts to assist libraries.

The first area is book preservation. Not only are we concerned with promoting the methods of preservation that appear most promising, but we are also concerned with the training of preservation professionals. Only by increasing the cohort of individuals who have competence in preservation methods will preservation become integral to the work of research libraries.

The second area of the Foundation's concern is greater bibliographic cooperation among libraries. We, like you, have been sobered by the problems encountered by the national bibliographic utilities as their costs rose far beyond anyone's expectations. Yet we remain convinced that cooperation and thereby greater cost-effectiveness must be achieved in bibliographic work.

A third concern for the Foundation is the rapidly rising cost of acquisitions, especially of foreign publications. The ARL itself has a small grant from the Foundation to study this problem and possible solutions to it. The rising cost of acquisitions has had devastating effects on particular fields. Take art history for example. Art books are rising in cost, as are foreign publications, and art history is a field in which many new acquisitions are likely to be foreign publications. The Foundation would want to help research libraries adhere more rigorously to a partition of the acquisitions territory, perhaps by following the RLG Conspectus or some other credible plan.

A fourth area of concern is really a summation of the first three—namely, the containment of rising operating costs. My colleague, Tony Cummings, has been engaged in an exhaustive study of the costs of operating several dozen research libraries over the past few decades. His study is leading to some startling preliminary conclusions and, when it is released, is likely to have a salutary effect on the understanding by non-librarians of the difficulties you encounter.

If I may tantalize this group by revealing one of your preliminary conclusions. It is that the conventional wisdom about the budgets of libraries is wrong. Most faculty members believe that a library's operations are consuming an ever larger share of the university's budget, but Tony has discovered that in fact the percentage has remained about the same. More significantly, within a typical library's budget, the percentage expended on acquisitions has grown at the expense of virtually everything else, while the higher rate of spending for acquisitions appears not to have facilitated the purchase of more books. I know some of you here

are not startled by Tony's conclusions, but I believe you will find that many others on your campuses will be.

A fifth area of concern for the Foundation is the plight of the independent research libraries. These institutions are very important for scholarship, especially in the humanities. Because their collections consist in large measure of rare books and manuscripts, the remedies that have helped university research libraries are not as useful here. There is also little chance of enhanced library revenue through the application of tuition-related formulas, as university libraries can often count on. Because our concern at the Foundation is in restoring the financial stability of these important scholarly institutions, we are considering a series of matching grants to some of them that would help stabilize, through endowment, some of their core functions.

A sixth concern of the Foundation is the condition of libraries overseas. Like all of the Foundation's international efforts, this one is targeted to particular parts of the globe. At present, the Foundation is investing heavily in the improvement of libraries in Poland, Hungary, and Czechoslovakia. Much of this money is being used for computerization and for cataloguing. Even more fundamental needs exist in these countries, of course, that are beyond the ability of the Foundation to help. It is not likely, for example, that the Foundation will pay for the construction of a new building for the national library of one of these countries. But there are things we can do. Just last week, there was a meeting of representatives of four of the major libraries o f Czechoslovakia at the Foundation's offices in New York. American librarians were also present, as were representatives of several American foundations. It was heartening to see the degree of unanimity expressed by the Czech librarians. All hoped for a library system in Czechoslovakia that is similar to the American one. In Czechoslovakia, I learned, research libraries are only incidentally connected to universities and are governed by a bureaucracy that is separate from the one that governs the universities. The Czechs at the meeting very much hoped that someday their system would resemble ours; with a closer integration between research libraries and institutions of higher education.

I hope that this brief description of these six areas gives you a sense of the range of the Mellon Foundation's interests in libraries. Let me acknowledge candidly that some other important library issues that we, like you, recognize as critical still remain on the periphery of our activity. For example, we are intrigued by the challenge of remote access to full-text material and the related question of electronic publishing, but we view these developments as still fractious, likely to agitate publishers and to raise vexing copyright issues. For the time being, therefore we've decided to wait and seewhile the issues evolve.

COUNCIL ON LIBRARY RESOURCES
W. David Penniman

MR. PENNIMAN: I'm delighted to be here this morning, and while I haven't had a chance to travel to every one of the research libraries, many of you look more familiar than you did when I first took this job last year. I hope to get around to visit the rest of you in the coming months. In fact some of what I'm going to be talking about today is a result of the travels that I have made thus far.

I realize that in the big scheme of things, the Council on Library Resources provides a very small amount of the total funding used by your libraries. The Council last year spent just under a million dollars. I expect in the coming years to significantly increase that expenditure through the set of programs I'm going to describe for you. But I want to caution you that I don't believe the future is going to go to library directors who, through prospecting, find some new pocket of foundation funding to stretch their budgets and continue in the same direction as they have in the past. The future will belong to those of you who take the bold steps that are necessary to redesign our institutions and the methods of operating. The Council intends to help those who are interested in taking such steps.

The areas of interest to the Council for the future will be based on my strong belief that we can't continue as we are. We must be prepared to be held accountable for the benefits as well as the costs of the services we provide. That's true for the Council, for educational institutions in general, and for our major research libraries. The major challenge will come in what we see as the driving force or motivation for libraries. For what will research libraries' leaders be held accountable? When leaders have their backs to the wall, as many of you do now, what will be the essential vision and force that motivates your decisions? How will the success of your institutions be measured?

I believe the Council can significantly help research libraries and the research library community to bring about change. The Council's major focus on the needs of research libraries in the past will continue. I know that some of you have heard me talk in the past few months and may have gleaned from what I said that somehow we are shifting our attention away from the research libraries. I want to assure you that's not the case.

It is true, however, that I believe the Council must expand its scope beyond our research libraries to be effective for you as well. The Council has to be concerned with the broader environment in which research libraries operate. Others operating in that environment include the computer centers that can provide database services; university book stores; bibliographic utilities that support your operations (of course, the council has been actively supporting that area in the past); the university, commercial, and professional presses that provide input to library collections; community libraries and their interaction with university libraries; and other facilities and services that are emerging as information resources of the future.

The Council is uniquely positioned as a fulcrum for change at the national and international levels. It doesn't have a vested interest in any one area, only a commitment to assure that libraries, as they evolve, will serve society well.

In the past months I visited more than 25 universities and libraries, 15 library schools, and a variety of government agencies. By the way, I'm working closely with the Office of Education, the Library of Congress, and the National Agricultural Library, to establish ties with all of those institutions. My travels and discussions have led me to identify four general areas of research and other related projects that the Council is going to focus on over the next few years. Based on these areas, we have already received initial funding from the Andrew W. Mellon Foundation and, to a lesser extent, from The William and Flora Hewlett Foundation. I want to run through those four areas briefly.

The first area is human resources. We need to look at the end-to-end issues of attracting, educating, maintaining, and advancing professionals in the information services profession. We should not focus our major emphasis on the question of what to do about failing library schools, but rather on the question of what to do to assure a steady stream of talented people into leadership roles in libraries and related information service organizations.

Some specific questions that I would pose for study in this area include: What can be done as far upstream as possible to attract bright young people to the information profession?; How and when should these people receive their basic education and their first professional degree?; How can we assure that professionals in this arena will be able to serve the culturally diverse audience that will make up their user population?; What mechanisms are needed to assure the continuing education of

these individuals throughout their professional careers?; How can mentors and other developmental mechanisms be used to help create strong leaders?; and as leaders reach the end of their careers, what can be done to assure that their skills and experience are used to "prime the pump" and create more leaders in the library arena?

Second is the area of economics of information services. Over time, we need to address the full range of economic issues associated with libraries and related information services, including both micro- and macro-economic issues. At the outset, however, we should focus on micro-economic issues and, more specifically, on questions that will lead to deeper understanding of information service operations in libraries. We need to be able to answer questions such as: How do we really know about the specific functions that a library performs?; How do these functions fit together to form information services (for example, document delivery)?; What is the overall cost of these services?; and how do they vary from institution to institution?; and What are the ways in which we can measure the benefits of these services? We must grapple with that issue of measuring benefits. I'm convinced that the cost and value of information services must be understood and that quantitative analyses are essential to the responsible management of libraries now and in the future. In addition, many of the tools and techniques used in total quality management programs currently receiving major attention in U.S. industry are appropriate for the redesign of libraries. We need to understand more fully how these tools can be applied in the library arena.

Third is the broad concept of infrastructure. This umbrella term includes the systems, services, and facilities that are drawn upon to help research libraries and other information services operate more efficiently and more effectively. Included in infrastructure are communication networks, bibliographic utilities, software and hardware vendor communities, and publishers. Also included as a major component of infrastructure is the current array of physical structures that are viewed as essential to library operation. The questions that should be addressed in this category include: How will emerging as well as current electronic networks modify the balance of power as well as the allocation of resources among different information service segments?; How can publishers and librarians work together to develop experiments that demonstrate processes of change that are beneficial to both segments as well as to end users?; What alternative designs for library facilities can demonstrate a focus on service rather than structure and illustrate that form can follow function?; and How can system vendors and bibliographic utilities work together when large central operations and local systems seem to be on a competitive collision course? The concept of infrastructure is extremely broad. I believe that a few well-chosen projects can begin to move us toward a more rational environment in which both information producers and information consumers are served well by libraries.

Fourth, and finally, is the inseparable pair—processing and access. All processing undertaken by our libraries should be for the purpose of access. The two should not be separated, just as the Commission on Preservation and Access has made that point with regard to preservation. If we look carefully at today's libraries, we find that much of the resources are consumed to support internal processes. It is often unclear how these processes directly or indirectly benefit the user. There are many research questions that can be addressed on both the processing and access sides that could significantly influence the cost and/or benefit of library processes. Examples of questions that should be addressed include: What steps are necessary to significantly reduce the cost and time of cataloging, and how radically can that process be revised?; If the users were to design an ideal information access mechanism, what would it be and how would it vary across different user segments?; How would it vary from what we now have?; How would such a design change the current internal processes in libraries necessary to sustain an access system? What actually occurs when users browse a physical collection, and how can the processes be transferred to electronic access systems?; What mechanisms help create the serendipity that occurs when a user accidentally discovers information or develops new ideas in unusual ways while in contact with the information resources in your library?; and How can those mechanisms be enhanced, especially where physical resources may be constrained and new access methods are available?

These four areas—human resources, economics, infrastructure, and processing/access—represent the broad umbrellas under which specific research projects and other efforts will be launched by the Council, and many of the current activities such as the management intern program and the fellowship programs will be folded into these programs I have just mentioned.

As I said earlier, the Council stands ready to help those who are willing to undertake the necessary and painful effort of redesigning the information delivery systems that we call libraries. I look forward to continuing interaction with you to refine and develop the program areas I have just

described. I will be on the road for the next several months trying to visit as many places as possible, and I welcome your comments and feedback on the programs as we put them in place.

THE FOUNDATION CENTER
Loren Renz

MS. RENZ: It's a great pleasure to be invited to your conference. Because I work for a special library and information center, I feel deeply connected to the roots and interests of this group. Many of the long-term challenges facing you such as technological innovation, preservation, access to information, and certainly economic pressures, are constant issues at the Foundation Center as well, albeit on a very different scale.

Furthermore, I was struck by David Bartlett's appeal for closer cooperation between publishers and libraries. We are both those animals, publisher and library, and the dichotomy of goals and operations between public services and publishing remains an ever-present and creative tension.

Our topic this morning is foundation funding in the 1990s, especially as it relates to higher education and research libraries.

From my special vantage point as a ten-year foundation watcher and not as "philanthropoid," per se, I can't pretend to bring you inside the mind of foundations to read their futures as Richard Ekman can—now that would be a really hot product. But from my ongoing work analyzing foundation trends, and especially from recent research on *Foundation Giving*, which is a new statistical yearbook that we have just released, and from some targeted research we have done on funding for higher education and libraries, I will try to give you a reading of the current state of foundations, what has changed since the 1980s, and a summary of priorities relevant to your field as expressed by foundations in their literature.

You have already gotten several handouts that I brought along this morning, including highlights from *Foundation Giving*, and a mini-report on library funding published in *Libraries and Information Services Today*, which was written by our staff. You'll also find outside fliers for our *National Guide to Funding for Libraries and Information Services*. I would recommend that as a basic development tool.

Looking at foundations, let's start off with the basics. I'm not going to overwhelm you with statistics today, but I do have to start out with a few.

The Center accounts for some 32,000 foundations in this country, but only 1,000 make grants of a million dollars or more a year. These account for about two-thirds of all giving. The 1989 giving total was about $8 billion. When I speak of trends, I'm really talking about these thousand foundations with staffs and directed programs, and when I talk about library trends, I'm speaking about a very tiny group indeed.

The foundation dollars are a relatively small piece of private funds, only about 5 to 6 percent, and they tend to be highly specialized in their purpose. As a result, it's important to take a long view of major funding trends to see just where higher education and libraries fit in the agenda of foundation giving.

The 1980s were a period of very strong growth for foundations when assets tripled and grants doubled. Adjusting for inflation, grants grew by about 60 percent. The 1987 stock market crash put an end to double digit growth, but since then, increases in grant dollars from independent foundations have exceeded inflation by about 2 to 4 percent a year. In 1989, assets of the largest foundations were up well over 13 percent, and a few foundations such as Lilly, Kellogg, Star, Weinberg, and Woodruff, saw tremendous asset growth. For small foundations, assets rose less than 13 percent on average, demonstrating the weaker investment positions of most small foundations. Given the current state of the economy, we are not anticipating the kind of growth over the next five years that we saw in foundations in the 1980s. We are in a much more steady state.

The single most important development of the 1980s was the astounding resurgence of new foundation formation. We estimate that over 2,000 new foundations with assets in excess of $1 million or grants of $100,000 or more a year were created in the 1980s. That exceeds the record number of foundations of that size created in the 1950s, and it is double the number created in the 1970s. This growth was in no way anticipated. It appears to be the product of an unusual combination of accumulation of new wealth, some social consciousness in the face of an era of greed, deregulation of foundations, Reaganomics, and the coming of age of the new breed of younger philanthropists who are entertainers, athletes, real estate developers, investment bankers, and entrepreneurs. Remember that many of those entrepreneurs came out of high-tech industries. Most of these new foundations are still relatively small and local in scope, but they do represent tremendous potential for you.

The opportunity lies in researching these foundations, their founders and their board members to determine linkages with your institutions. The op-

portunity also lies in making your case to them as critically important institutions in their communities. This relates to smaller and new foundations and not to the large foundations that you are familiar with who have invested in your field for quite some time.

Another major change that took place in foundations in the 1980s had to do with staffing and leadership. Philanthropy began to take itself more seriously as an industry, and larger foundations moved to professionalize staff. Professionalization has been a constant theme of the Council of Foundation's annual meetings, although most training and development is more likely to take place at the regional or local levels.

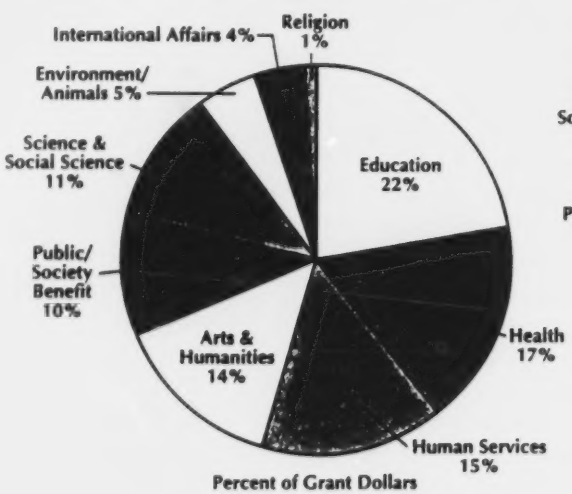
A few of the largest foundations like Hewlett and Ford have begun to set limits on job duration (five to seven years for program officers). The point is to draw talented program staff from nonprofit organizations, government and universities, bring them into foundations, and send them back out into those institutions. So far we haven't seen limits set on presidential duration, but a study of foundation management is about to recommend that policy. Still, leadership has passed on to the younger generation. Some of the largest foundations such as Kaiser, Pew, MacArthur, and Rockefeller, all have new leadership, certainly a younger generation of leadership, and we have also seen the first cadre of women leaders appointed to large foundations.

For many years Margaret Mahoney of Commonwealth was the sole female president of a major foundation. Younger leaders tend to come from a background of social action. They are moving to bring foundations into the arena of advocacy to nudge our failed public delivery systems to experiment with more holistic models. They are more comfortable with a public role for foundations, and working with business and government to affect change. I think they are also more comfortable with technology.

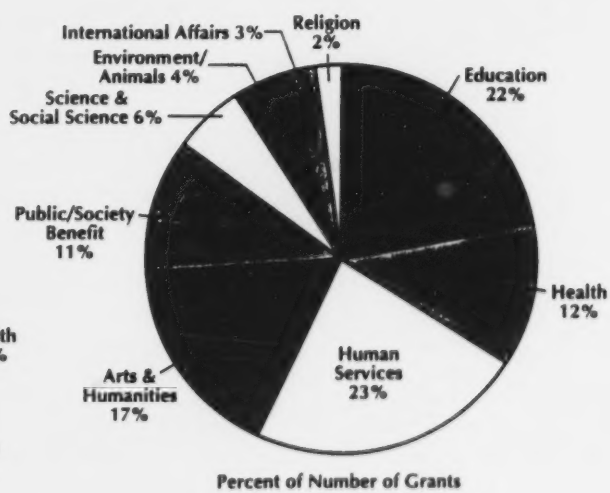
I have just mentioned the word holistic. I see this as a key shift in foundation thought, one that ranks across all fields, but one that is especially true in education. Funders are looking for programs that "attack the roots of problems, not just the symptoms." The rationale is that focusing on higher education is moot if children from kindergarten to 12th grade are not nurtured.

This new model places equal value on home, school, community, and institutions in the community to reinforce the educational process. Universities will have to play a role in that holistic process. They will have to engage in problem solving in a bigger arena.

GRANTS BY MAJOR SUBJECT CATEGORIES, 1989



Percent of Grant Dollars



Percent of Number of Grants

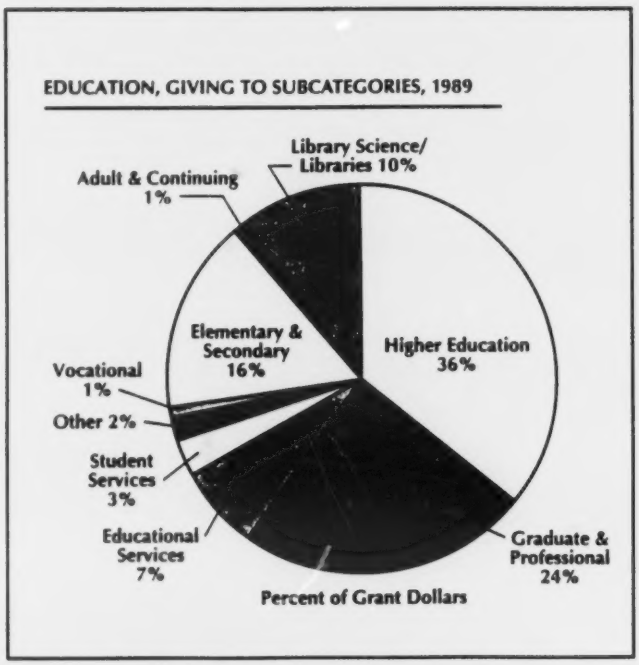
Graphs courtesy of The Foundation Center.

This brings us around to foundations and education. I'm often asked the question, "is pre-collegiate education gaining at the expense of higher education?" I think the answer is no, not if we look at colleges and universities as recipients. One out of five grants are paid to colleges and universities. One out of three grant dollars of that $8 billion I spoke about before goes to colleges and universities.

Reform and restructuring of pre-collegiate education is certainly growing as a field, but much of the work is being done at the college university level through teacher training, curriculum development, education, research, and evaluation. There is also growing support for linking four-year institutions to community colleges, linking colleges and universities to private schools and school systems.

I'm going to shift now and talk more about these trends in higher education and foundation funding and then bring you specifically into libraries.

One phenomenon is that the gap between foundation funding of private versus public institutions has narrowed. Eight years ago, privates received three times as much as publics. Now they receive less than double. Research universities continue to win the lion's share of funding. This is consistent with increased support for graduate education, and the largest foundations spend a greater share of their budgets on colleges, universities, and graduate schools than mid-sized foundations.



Corporate and independent foundations spend about an equal share of funding for colleges and universities, but corporates generally supporting her education as a field, while independents channel funds through institutions to support science, social sciences, library sciences, the humanities, arts, and public policy.

In the appendix, you will find a list of programmatic themes in higher education and what foundations want to support and why. I'm not going to go through that list.now, since I want to get to libraries. One theme that I would point out is addressing the future needs of higher and graduate education. This idea of future planning, the increased support for consideration of long-term needs of institutions such as faculty development, accommodation of demographic changes in the general population, and quality of teaching, that is certainly a theme running throughout annual reports these days.

If we look at trends in funding of research libraries, we find that grants are most often made under the auspices of the funder's education program or through some other program area and not through a stated library program. I don't think I have to tell you that.

As a type of recipient organization, libraries receive a small percentage of foundation dollars, about 2.2 percent. Of these, academic research libraries continue to be the recipients of the largest grants. Support is concentrated in the areas of capital, construction, equipment, and automation projects. Within the overall education budget, 10 percent of funding goes to libraries. Funding for libraries increased in the mid-1980s. It leveled off, and it certainly has not been increasing in the past few years. So I'm very glad to hear of Mellon's initiative to convince their peers that this is an important area in which to invest. That does not mean that the dollars are falling. As I said, because of the rising pool of dollars, you will still find the dollars were consistent, but it hasn't been an increasing share. Large grants tend to skew the funding patterns. In 1990, there were 17 grants of $1 million or more to libraries that we could account for compared to about 14 in 1989.

I mentioned that most money for libraries is going into capital projects. We now have a new classification system that breaks types of support down into very small or much more specific areas. It adds up to about 56 per cent of dollars for libraries going into capital budgets, including

about 7 percent for endowments. Computer systems alone accounted for about 14 percent of total funds to libraries. Another 36 percent goes to programs. Last year we started to track collections acquisition, and 7 percent of all dollars for libraries are going to collections acquisitions.

Last, I would like to go through some of the specific programmatic interests that the foundations are supporting based on a review of the literature of the leading funders. I'm talking here about the Council on Library Resources, Lilly, Ford, Rockefeller, Knight, Mellon, Buhl, Mott, Kellogg, Luce, Pew and Getty. We looked at a much larger number, but I'm mentioning those because we extracted some of these programmatic interests from their grants.

We definitely saw a trend in: strengthening existing collections or creating a new collections related to enhancing the mission of the research institutions in the form of collection purchases, funds for acquisition endowments or creation of data banks; the integration of information technology, including automation, automation planning, software redesign, conversion of bibliographic resources, and continuing education for information professionals; project-related regional or national information services, including funding for organizations and consortia, providing technical assistance for supporting consolidation of collections or pooling of resources; publications sponsored by research collections; documentation projects sponsored by research institutions; studies that attempt to evaluate the efficiency and efficacy of research institutions in fulfilling their missions and in particular aspects of operations; costs related to conservation and/or cataloging of rare primary resource materials; projects that attempt to increase the effective use of libraries' resources in teaching and research; sponsorship of the symposia and conferences dealing with issues facing research libraries, primarily being done by the Council on Library Resources; and in support of libraries at historically black and Native American colleges. Strengthening of black colleges has been a very broad thread running through higher education for the last three or four years.

Those are the themes we have been able to extract. It's up to you to do the research to find those particular foundations that you think are the best prospects for your own work.

In conclusion, I encourage you, as you approach funding, to focus on your own mission, how your institution fits into the overall changing social, cultural, intellectual, and economic agenda of our times. How is your institution preparing itself, its immediate members and the external community, for the needs of future generation, and in cost effective ways? And last, don't overlook new sources of funding in your local area. It will take time to cultivate, but this is a very important potential for the next decade.

MR. CURLEY: Thank you. We have time for questions. I would first like to thank our three speakers for their willingness to share their perspectives with us. Certainly the partnership between the research library community and that of the foundations has been essential to any hopes of meeting our serious goals, and will be even more important in the future.

MS. VON WAHLDE: Loren referred to the narrowing gap between public institution support, private institution support, and foundations. My question is directed to Mr. Ekman, who represents a foundation that has had a very strong track record in supporting private institutions. Is this trend true for your own foundation as well, or would you comment on that?

MR. EKMAN: I have not had an opportunity yet to look at those statistics over time, so I really cannot give an answer.

MS. VON WAHLDE: I'm sure many of my other colleagues have had more recent contact with the Mellon Foundation, but the impression I had from conversations with them a few years ago was that they tended generally to support private institutions; although they would not ignore a good proposal from a public institution, there was a strong history and tradition of putting their money with the privates.

MR. ROSENTHAL: Richard, you mentioned cooperative bibliographic projects. Can you give us any idea of what forms that might take, or do you have any examples in mind?

MR. EKMAN: As much as we take pride in the system of higher education in a country in which institutions pursue their own priorities in an entrepreneurial, decentralized way, the stakes are so high when we consider building library collections that cooperation is absolutely essential. It is just not possible to have every library fend for itself. The Foundation's interest is in encouraging even greater efforts to divide up responsibilities among libraries, not only in terms of the preparation and sharing of bibliographic records, but in collection building itself.

We know about the cost issues. What we don't know is whether the definition of scholarly fields might change over time such that even if one were to divide up the territory, one couldn't be certain that those plans would be viable for the next decade or two. We would welcome solutions that bring libraries into a greater degree of cooperation and planning.

In times of tight budgets, the tendency of any institution is to protect the things that are most fundamental to its own existence. Carried to the extreme, that means that each one will concentrate on the basics and all will duplicate one another. In the meantime, whole areas may be neglected.

MS. TAYLOR: One of the things that librarians sometimes find frustrating is that we are all frequently urged to cooperate by our administrations in developing collections, but our universities are somewhat retrograde in cooperating themselves at the program level. So we are often forced to duplicate basic resources because our institutions are competing so vitally to establish very similar programs. The foundations might also consider trying to encourage programmatic cooperation among universities so that libraries are not forced into this scenario where it is very difficult to find an area of collections to de-emphasize.

MR. STUDER: The question is for Dave Penniman. That sounds like a very ambitious program for the Council, and I can't say how much of a departure that represents in the last five years. Does this suggest a major expansion of staffing? How does the Council envision accomplishing this broad scope of activity, and does it imply the need for additional funding beyond what you already have?

MR. PENNIMAN: It certainly does. We have already started approaching foundations to support specific program areas in addition to the support we are getting from the Mellon Foundation for general activities. We spend around a million dollars a year now. I expect to see that grow by a factor of four over the next few years. We clearly don't have the staff to support that level of spending, nor do we have the money, but I'm working on both. As many of you may be aware, we are looking to add a program officer by the end of this year, and over time I would expect to have a program officer for each one of those programs.

I also recognize that while those are broad program areas, there are things we can do in each

one of those areas right away, and in fact some of the activities that the Council already has underway fit well within those programs, such as the management intern program; that fits right into the human resources area. We are going to do something in each area now and build them as we go along. Human resources is currently getting a lot of my attention in terms of developing funding sources. I also believe the economics area needs immediate activity, and Malcolm Getz is chairing a task force to develop some initial projects that we can undertake. We are going to be looking for proposals in that area, and I have some support to fund the economic areas right away.

MS. SHARROW: I wonder if you could tell us just a couple of practical hints about grant proposals? What is good for you? What do you like to see? What is the successful grant proposal? Most of the people in the room have served on review bodies or written grants, and yet we see many proposals that are written very poorly. I wondered if you would comment.

MR. PENNIMAN: What we have put in place is a peer review processes for the proposals at the Council, with a committee chaired by Deanna Marcum . We have had a good screening process in place since January; it's actually a continuance of directions that Jim Haas started last year.

The way to start with the Council is not with a full-blown proposal, but with either a telephone call or a letter of inquiry identifying the problem, why it's important to you, why it ought to be important to the Council, and most crucially, why it should be important to the broader community. The Council will want to know about how long you think it would take and about how much you think it would cost. We can discuss then what it involves in scope or whether it needs some modification. Once we get to that point, then it's time to start putting together a proposal. It is true that we get proposals that range all over the map in quality.

The most important thing is a good idea. There is a lot of interaction that goes on in development, so if you come up with a good idea, we can actually help you develop it to the point where we can get an acceptable proposal. Marty, since you're sitting on the Proposal Review Committee, would you like to comment on what you would like to see?

MR. MARTIN CUMMINGS: It's not important to know what I would like to see, but perhaps in the context of the question, it would be worth noting that in the present review of about 75 research grants funded by the Council, I find little distinction between grants that receive a small amount of financial support and those that receive larger sums. I recognize that it's difficult to evaluate grants qualitatively in that respect. But if you use measurements such as those used by the National Science Foundation (for example, publications resulting from support of research), the smaller grants have actually led to more formal publications in national and international journals than have the larger grants.

There is another aberration that I find somewhat interesting, namely, that in recent years, no matter what the characteristic of the grant, questionnaire, survey, or demographic study, there seems to be an affinity to request $25,000. I think we need to deal with that problem.

MR. PENNIMAN: Let me make one more comment. It reminded me of a component of proposals that, in the future, will serve as an assessment piece. That is, to determine if you actually accomplished what you said you were going to accomplish and if it had any effect.

MR. EKMAN: One of the main thrusts of the Mellon Foundation is to encourage sustained support for institutions that are important in education and scholarship, bridging other areas of activity in which the Foundation has interest. A lot of our money is awarded in the form of large grants to institutions that are important for a particular sector of activity, including, not surprisingly, libraries and universities.

The best way to approach the Foundation is to make informal contact with a telephone call or short letter—to get a sense from the staff as to whether your ideas correspond to an area of priority identified by the Foundation's trustees. Only after that has been done should one start producing voluminous proposal documents. There are no particular forms or deadlines. The Foundation's trustees meet quarterly

The contrast between this procedure and the way in which NEH does business is quite significant. In the case of NEH, there are stated guidelines and deadlines and every proposal must be prepared in great detail. Numerous reviewers are going to look at it before a final decision is made. The Mellon Foundation, however, has a very small staff. Our professional staff is only ten people to cover all areas and a premium is placed on getting work done efficiently, so brief proposals are usually all that's necessary.

MS. RENZ: As far as proposal writing, we at the Center encourage very short proposals. Making the contacts beforehand and discussing ideas be-

fore a proposal of your size goes out would be important. It is important to make sure the interest is there and to determine the level of interest and not simply just to send a proposal.

MR. CURLEY: I was hoping to get that type of advice privately, but here it is for all my competitors. It's very helpful. Thank you.

MR. RIGGS: Could you elaborate on what the Council is looking for in the way of estimating or measuring the cost of library services?

MR. PENNIMAN: We must grapple with the issue of measuring value, and in order to do that we first have to understand what these services cost. We know that in many cases the costs vary widely from institution to institution partly because of the method in which costs are computed within the institutions. If you can accept a way of measuring what things cost, the greater challenge then is measuring the value of the benefit of services. There are a number of ways that it can be approached. When I was at Bell Labs I saw methodologies that I thought were very useful for determining the value of information services. Since that time, I have seen other techniques to measure values that were previously considered immeasurable. One today called contingent evaluation is used by environmental activists to place a value on the depletion of the ozone layer. If they can measure a value for that, then we certainly ought to be able to measure the value of our services. It is going to take some imagination, some research, and probably most importantly, a change in our own mind set as to whether or not it can be done. I'm open to any proposal that can begin to grapple with the issue of quantification of the return on investment that's being made in research libraries. Only through that will we be able to hold our own. I know that quantification isn't enough in itself, but it's necessary.

MR. BILLINGS: Listening to what David said and taking what we have been talking about the last day or so with respect to ARL statistics, it occurs to me there needs to be a close relationship developed between those of you who work in statistics and in the business of measurement and assigning values.

MR. PENNIMAN: That's a good point, and I want to assure you that I'm spending a lot of time with ARL staff and working as closely as I can with their developments. I hope that we can start looking at output measures as well as input measures.

MS. RENZ: David, you mentioned building in outcome measures of assessment and evaluation into a project. That comes up very frequently among organizations that are seeking grants. Is it appropriate in the proposal to seek the funding for evaluation and assessment as well?

MR. PENNIMAN: Yes. I see that as a vital component, and it is going to cost to do it. We should support that. Also as Marty pointed out, we found that the smaller grants often led to publication where some of the larger ones did not. I want to build in a component to make sure that there is dissemination, which is crucial.

MR. CURLEY: Thank you, Richard, David, and Loren.

BUSINESS MEETING

MS. SHARROW: I would like to call the ARL business meeting to order. The Board of Directors yesterday elected a new Vice President/President-Elect, and I'm pleased to announce that the honor has gone to Susan Nutter from North Carolina State University.

Our first order of business is to vote on 1992 ARL dues. All members received a very detailed document sent by the staff in September that explained the rationale behind the request for the modest 4 percent dues increase from 10,000 to $10,400 for 1992.

In order for a discussion, I would entertain a motion and a second on the matter.

MR. CAMPBELL: So moved.

MR. BOISSE: I Second it.

MS. SHARROW: Moved by Jerry Campbell, seconded by Joe Boisse. Discussion, please. [No questions raised] Are you ready for the question? All those in favor of a 4 percent dues increase, please signify by saying aye. Opposed?

Let the record show it was unanimously carried. Thank you very much.

The Nominating Committee, chaired by Arthur Curley and members Penny Abell, Betty Bengtson, and Roger Hanson, presents a slate of three ARL directors nominated for the board beginning this year. They are: John Black, University of Guelph; Nancy Cline from Penn State; and Sul Lee from the University of Oklahoma. Do I hear any other nominations from the floor? Therefore, hearing none, I would like to call for a voice vote for directors Black, Cline, and Lee. All those in favor, please signify by saying aye. Opposed?

Let the record show that the vote was unanimous. Congratulations! (Applause)

MS. VON WAHLDE: I would like to register a protest concerning why we were provided with a paper ballot if there is not an opportunity to use it. I'm uncomfortable making any other nominations in a group setting like this, or not voting for the slate as presented. This puts me in a quandary. Maybe I'm the only one troubled.

MS. SHARROW: Discussion?

MS. VON WAHLDE: I expected the piece of paper to be checked.

MS. SHARROW: I think that is a perfectly legitimate concern, and we will discuss it at the next Board meeting. Are there any other items of business that you would like to discuss today? The committee reports will be done tomorrow morning.

I would like to ask Duane Webster if he would give the Executive Director's report.

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Executive Director's Report

MR. WEBSTER: I'm pleased to have another opportunity to give an Executive Director's report on the health and overall vitality of the Association.

As you know we have been spending the last three years refining the programs and establishing a responsive operating framework as well as putting together the talent and financial resources necessary to operate those programs. We have been putting a lot of our time and effort into building partnerships and alliances with a variety of external constituencies in order to leverage ARL's influence on the issues that you would like us to address.

I feel very good about the progress we are making. I would note that our work is framed by the ARL Strategic Plan. That document continues to serve as a general structure to organize our work and provides a very specific set of issues that we are pursuing.

Our activities are reported in the Activity Report. That is in the package distributed before this meeting. You will note that we put a lot of time into describing what we are doing so that you're fully aware of how your investment in us is being used. As important as those activities are, even more important, from our point of view, is whether or not we are working on the right set of issues and whether or not we are advancing the points of view that you want us to advance. That is why we recently put together the paper, "Challenges Facing Research Libraries" that was in part published in the ARL newsletter number 156. The initial request for that challenge issues paper came from the

Association of American Universities. They wanted to know what we are working on and whether or not there was a portion of that agenda that they should be working on with us. That paper helped us to present those issues. I might say that that paper is derived from the *Strategic Plan* and reflects the seven broad areas in which the Association has established objectives.

More recently, John Vaughn, the Federal Relations Officer from the Association of American Universities, asked me to join the AAU Education Committee in Toronto to talk about that paper. I did go to Toronto and meet with the Committee. It is chaired by George Rupp, president of Rice University. There were 20 presidents spending an hour and a half on these three topics over breakfast. I made a concerted attempt to draw on the paper to describe some of the work research libraries are engaged in in terms of working on those issues. I noted that research libraries and their institutions comprise only 3 percent of the 3,400 academic libraries in the U.S. today, yet this 3 percent possess more than 40 percent of the resources that make the national system. Access to information resources and educational materials make that system work. I also drew on the chart that appeared in the last issue of the *ARL Statistics*, which describes how economic pressures are working on the anchors of this national access system and how those pressures are damaging the ability of these institutions to continue to provide access to the global knowledge base that is needed. I then described several of the emerging strategies being developed by research libraries to address those problems, and I indicated that those strategies included systematic, regional, and national cooperative collection development and resource sharing, aggressive movement to networked information services, encouragement of alternatives to commercial publishers, deployment of available electronic information services, and building a comprehensive national preservation plan. I concluded by suggesting that AAU join with ARL in putting together a working group to address some of the cross-cutting issues that are hindering progress in those areas.

The response to these comments was very supportive. The presidents were very well informed about the scholarly information crisis, and were very interested in actions on those issues. They explicitly said the time for talk was over and that it is time to take action on those issues They don't want to develop a national agenda. They don't want another inquiry into the needs. They want to start working on them, and they invited ARL to work with George Rupp, who is the Chair of the committee and John Vaughn, Federal Relations Officer, to develop three or four projects ideas. I'm a little hesitant to promise that those projects will come to fruition, but it is a very important step for us to be able to talk directly with these presidents about what might be done collaboratively at that level.

The outline of my comments that I worked from with the presidents was shared with the ARL Board of Directors. We spent a fair amount of time discussing this approach and assuring ourselves that this approach had their full understanding and support. I would also say that if others of you are interested in that outline of my comments, that can be made available.

Other aspects of the *Strategic Plan* include the financial issues and organizational issues. Financially, the Association is operating within the plan established for this year. We are operating at full capacity. We are looking for ways to cut corners, control costs, and save money while providing as active and robust an operation as we can. We do expect a balance of revenue and expenses for the year, and we are very pleased to see your support for the dues proposal.

I also want to note that the development of ARL's internal organizational resources is moving quite well. Last year's organizational initiatives have progressed. As you saw from the reports on the first day, CNI and OSAP have already been quite influential. While these new initiatives have made extraordinary progress in a very short period of time, the well-established ARL services and programs, the preservation effort, the statistics effort, the OMS, the collection effort, communications, and federal relations, have all been active and successful during this process of initiating new activities. This is a tribute to the talent and commitment of the staff who are working on your behest. This is an extraordinary group of people, and it is quite an opportunity for me to work with them. One major change in staffing in this last year was the departure of Jeff Gardner after 17 years of a close working relationship. It is a personal loss as well as an organizational loss. It is hard to imagine how we are going to get on without Jeff's energies, insights, and his fun-loving spirit. Fortunately for us, we have been able to welcome back Jaia Barrett, who took a two-year leave of absence to accompany her husband on an overseas assignment. I'm very pleased that she has been able to come back and assume the position of Director of the Office of Research and Development.

I would also like to note progress on several of the broader concerns that are likely to affect the future, especially the efforts we are making to build a broader awareness of the research library agenda of issues and building alliances with those external

constituencies that can help us.

The October 23, 1991 issue of *The Chronicle of Higher Education* is a good example of how our issues are attracting the interest of higher education. *The Chronicle* has just initiated a new column on information technology, a column that brings a set of our concerns to the attention of its readers.

The current issue starts a companion column on libraries. It talks about several of our member institutions and their achievements. It's a positive statement about what research libraries are doing. There is a report on efforts from the Michigan, Stanford, and California systems and a note on an ARL activity.

The current "point of view" essay is contributed by Doug Greenberg, who is the Associate Vice President of American Council of Learned Societies (ACLS). Doug expresses a concern that the move into the new electronic environment will perpetrate the elitism in the availability and accessibility of information. The essay underscores the importance of working with ACLS staff to acquaint them with our commitment and our progress toward making the new systems of access as equitable and as democratic as the old systems. Part of the progress we are making in that regard is the good news that ACLS has invited ARL to become an associate member, a new membership category. They have wanted us to be directly involved, and we have had a long history of a good working relationships with them. We will now be a part of the Council of Administrative Officers (CAO). These administrative officers of constituent societies meet twice a year, and we will be joining them and participating in those discussions. Ann Okerson and I will be going to St. Louis in November to participate, she on a panel, and I in the CAO event.

Our efforts to represent your interests in the U.S. federal legislative process are well known, and as our recent meeting in Montreal demonstrated, we have a very strong interest in and commitment to working on information policy issues in an international arena.

I want to underscore the importance of your involvement in that process. Again, we don't have funds to exercise influence with a PAC, a political action committee. We have to exercise influence in Washington through the network of influence and contacts that you possess, so it's very important that we can call on you for letter writing campaigns, for direct personal contact with legislators, for your willingness to come to Washington to provide testimony, and also very importantly, your willingness and ability to host local and regional seminars and discussions on the issues that concern all of us. We are seeing that take place more often.

I would like to cite another working arrangement in which we are making excellent progress. Everyone is aware of the alliance that ARL has with EDUCOM and CAUSE in terms of the Coalition for Networked Information. I reported in May that we were working on a new configuration called the Higher Education Information Resources Alliance (HEIR Alliance). It is the same three organizations coming together to formulate projects that would advance our interests. This is going to be a project-based alliance. The first HEIRA project is an executive communication series aimed at university presidents. The presidents and chief executive officers of the three organizations EDUCOM, ARL , and CAUSE, met this week to put together a plan for producing the first issue of the HEIRAlliance report, which we're looking to distribute in the third quarter of '92.

The Consortium of Social Sciences Associations (COSSA) has also extended ARL an invitation to join. Ann Okerson mentioned yesterday her work with NASULGC, which is leading toward the establishment of a task force involving ARL and members of the higher education community. In addition, NASULGC plans to study current problems of journal access and pricing.

The ARL Board of Directors approved a small working group to follow the several national efforts under way to address scientific and technical information problems and needs, again, building on the earlier work and discussions of the membership. This group will work with several other organizations, including the Council of Library Resources, the American Association for the Advancement of Science, and the Library of Congress.

I am also pleased to report that progress is being made on the project to understand better the evolving relationship between research libraries and foreign publishing. This study of foreign acquisitions and research libraries' outlook for foreign publishing, the needs of scholars for foreign materials, and the impact of emerging technologies for improving access to these materials was funded in June by a $200,000 grant from the Andrew W. Mellon Foundation to do the initial study. We will advance that project by working directly with several member libraries, the Council of National Resource Center, and the American Academy of Arts and Sciences.

Finally, we are working actively with ACRL directors, the Department of Education, the National Academy of Sciences, members of the Coalition of Networked Information, NCLIS, and other national groups to continue to refine and improve the statistics that track library characteristics, growth, and access to the required information

resources, particularly in the networked electronic environment.

In summary, you have an organization that has a very large and active agenda of issues in which we are attempting to follow your expressed needs and interests. That agenda is going to be refined and improved on the basis of the discussions that took place today. It's a dynamic agenda that we as staff are continuing to understand and support. You have a talented and hard-working staff. This is a staff that I can assure you is very responsive to your interests and to your needs.

And finally, we are making a major long-term investment in building working partnerships with other enterprises in order to address the agenda of issues that you are bringing to us. We hope that's a partnership that is sufficiently flexible, responsive, and focused on moving forward and taking action to meet your needs.

In closing, I want to personally thank you for your involvement and support. That is essential to the success of this enterprise.

I also want to congratulate the staff. As I have said, they are talented, committed, and very hard working. Finally, I want to acknowledge the leadership and support of the elected officers, the Board, and the committees. This structure of governance has proven to be a fundamental source of support, strength, and guidance as we moved into this more active program.

Thank you.

MS. SHARROW: Thank you, Duane. As ARL's President over this past year, I have had an opportunity to both represent the Association in a variety of settings and to gain a first-hand understanding of the work of this organization. The impression that I take from this experience is that the Association is active, vital, and increasingly important to research libraries.

As I look back over the year, I'm very pleased with the achievements of ARL, and I would like to briefly note those that come to mind.

In terms of challenges facing research libraries today, Duane and his staff have prepared a useful summary of member institutions' needs and responses locally and nationally. This summary, which was published in the May *ARL* newsletter, is a useful device for initiating discussions with campus groups and national agencies such as the Association of American Universities. It shows how strong and substantive our strategic planning process has become.

The reformatted *ARL* newsletter is a big success. The new editorial policy that focuses first on major issues affecting research libraries and then on giving concise updates on actions of interest to the leaders of these institutions is both welcome and well received.

I am also proud of ARL's joining forces with EDUCOM and CAUSE to operate the Coalition for Networked Information, now in its second year. The Coalition has become the premiere national enterprise concerned with creating and accessing information resources in a networked environment.

The HEIRAlliance is well underway and has met twice to develop a communications structure among ARL, EDUCOM, CAUSE, and the many colleges and universities in North America.

The ARL Office of Scientific and Academic Publishing has made its mark in the short period of its existence. The office has worked to broaden awareness of the pressures affecting the future of scholarly communication and has marshalled several initiatives to address the problems of serial prices, the national legislative and information policy arena, and the success in advancing legislation.

The Association has had a long and influential presence in Washington. This past year is no exception with the work on the NREN legislation finally coming to fruition, the successful struggles with reauthorization of the Higher Education Act, and especially Title IIC and the continued funding of the brittle book program of the National Endowment for the Humanities.

The establishment of an Office of Research and Development (ORD) operates as an avenue for project ideas to be identified and funds secured to move them forward. This year was notable for securing funding for the study of foreign acquisitions and the movement of a number of ideas to a proposal stage, including the sciences and technology and cultural diversity.

I would like to close this list of 1991 achievements by saluting the core of talented and committed ARL staff that Duane has already mentioned. This year was notable both for the achievements of the staff and for stability in the staffing situation. Following 1990 when a new team of both support and professional staff was created, we saw a consolidation and a moving ahead in 1991.

In order that all of us have a chance to see the staff attending this meeting, I have asked them to stand so we can acknowledge them. I want to welcome back Jaia Barrett, who is taking over Jeff Gardner's position as head of the ARL Office of Research and Development, and she will also edit the newsletter. You have already heard from Susan Jurow, Ann Okerson, and Paul Peters who reviewed the progress of their programs during our opening session; Sarah Pritchard, the Associate Executive Director, who handles the statistics pro-

gram, membership programs and directs the Executive Office operations; Prue Adler, the Assistant Executive Director for Federal Relations and Information Policy; Brigid Welch, the Senior Program Officer for Systems and Procedures Exchange Center and OMS Operations; Jutta Reed-Scott, the Senior Program Officer for Collections and Access Services, including preservation. Craig Summerhill, who is not with us this afternoon, is the new Systems Coordinator of CNI and ARL; Joan Lippincott, Assistant Director of CNI; Gary Dikeos, Office Manager and meeting planner; and Pam Bixby, Communications Specialist and editor of the ARL minutes—we want to thank you all.

In closing, I would like to express my appreciation to the Board of Directors who have worked hard this past year. They are a dedicated group of people. There are four Board members whose terms expired at the end of this meeting. Tom Shaughnessy, Ellen Hoffmann, Charles Osburn, and Martin Runkle are all going off the Board. We owe them thanks.

It was a wonderful year. I had a lot of fun, and it was great to work with all of you, and now I would like to turn the gavel over to the vice president, now president, Arthur Curley. I hope you have as exciting a year as I did.

MR. CURLEY: Thank you. The script for the president-elect at these meetings is very brief and straightforward. In effect, it says "say thank you, shut up, sit down." It is a traditional script. It wasn't invented for my benefit, but there are a couple of things that must be said.

Like all of you, I have served on many boards in this profession and related professions. More than I would care to count were cantankerous, missing the forest for the trees, or spending three days to do an hour's work. It has been such an extraordinary change from that and a delight to be a member of the Board of Directors of this association, and obviously we have very, very splendid support from the staff that enables us to do this. But this past year has been one in which it seems that the Board has worked so harmoniously, so effectively and has grappled with truly extraordinary and important issues. I could not possibly sit down before saying enormous credit for this goes to our president Marilyn Sharrow.

She has worked tirelessly and kept us on target. She has represented us effectively everywhere; Marilyn has been there with Duane effectively representing us, and it has just been such a delight and a learning experience to work with you.

I take on this responsibility certainly with a sense of awe, but the example you have set and what I have learned from you, Marilyn, is going to enable me to get through the year in far better shape than might have been the case otherwise.

And I have one other little responsibility. Among your many achievements, not the least of them was the creation a year ago of an instant tradition, and that is the presentation by the incoming president to the outgoing president of a little keepsake. It differs in no significant respect from the one that you presented last year, so I would like you to accept it and to accept our thanks.

[Mr. Curley presented Ms. Sharrow with an engraved paperweight.]

I think it's important to say that these have not been very easy times for libraries. Many of you are going back home to very severe budget crises which are perhaps part of an even larger crisis in values in our society, and identity crises about the place of libraries in the society and the nature of their role.

It has seemed to me more important than ever that the Association helps to make us visible and is on the cutting edge of addressing the issues, that it continues to be strong and healthy and on that cutting edge, and I take on these responsibilities with a sense that this is truly that kind of organization.

We are entering our 60th year. It's a time for us to celebrate the achievements of this remarkable association, but to do so with a sense that on those achievements, we build the ability to address the very great challenges that still confront us.

Our next meeting is May 13 to 15th in the beautiful historic city of Charleston, South Carolina. I look forward to seeing you all.

Thank you. The meeting is adjourned.

APPENDICES

APPENDIX I

Report on Association Activities

May 1991 - October 1991

Summary

The Association's conceptualization of research library issues has become an agenda for communication with many other education and public policy organizations. At the request of the Association of American Universities, the current needs of research libraries were described in a brief paper, "Challenges Facing Research Libraries." Seven broad challenges are described as clustered around the ARL continuing objectives. This paper was subsequently published in the ARL newsletter (May, 1991, no. 156) and led to an invitation for the Executive Director to join the October 21st meeting of the AAU Presidents to discuss possible AAU responses to these issues. The paper has been widely distributed and integrated into other contexts such as letters to the editor and library colloquia.

Highlights of ARL program activities since the May membership meeting include:

- Government documents integrated into *ARL Statistics*, page 3
- Editorship of ARL Newsletter transfers to Jaia Barrett, page 5
- Minutes of the 117th Meeting, sporting new design, to be published in December 1991, page 5
- Fall membership meeting focuses on strategy and issues, features foundation and publishing executives, page 6
- Latest SPEC Kit focuses on library services for persons with disabilities, page 9
- OMS launches two new training programs, page 10
- Advisory Committee on the OMS formed, page 10
- Susan Barnard to serve as Visiting Program Officer, page 10
- NREN legislation passed by House and Senate, page 11
- User fees on government information proposed, page 11
- ARL and ALA recommendations on HEA accepted by House committee, page 11
- ARL and NEDCC jointly sponsor Roundtable on Mass Deacidification, page 13
- 1989-90 ARL Preservation Statistics published, page 13

- Committee on Access to Information Resources prepares white paper on "Evolution of Electronic Resource Sharing," pages 14
- OSAP conducts survey on electronic journal use, page 16
- *Directory of Electronic Journals, Newsletters, and Academic Discussion Lists* published, pages 17
- ARL directors elected to IFLA Standing Committees, page 18
- NCIP Special Focus workshop on the conspectus to convene in Rome, page 19
- Institutes conducted in Australia, page 19
- Jeffrey Gardner leaves ARL after eighteen years of service; Barrett returns as Director of ORD, page 20
- Phase I of the H.W. Wilson Cultural Diversity Project concludes, page 21
- Mellon Foundation funds study of issues surrounding foreign materials acquisitions, page 22
- NEH grant will support the enhancement and revision of the Preservation Planning Program, page 22
- Dan C. Hazen to serve as ARL Visiting Program Officer, page 22
- CNI membership dues reduced for 1992, page 23
- DEC workstation and Ultrix server installed for CNI/ARL use, page 24
- CNI Fall Task Force Meeting theme is "Catalyzing the Flow of Networked Information," page 24

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ARL Capabilities

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I. Statistics

The statistics capability is organized around collecting and distributing quantifiable information describing the characteristics of research libraries. This capability includes operation of the ARL Statistics Committee, and collaboration with other national and international library statistics programs.

Statistics program development. In June 1991, ARL directors received a package of recent reports from the statistics committee and the ARL office: 1) summary of the new approach to integrating government documents statistics [see below]; 2) draft of the 1990-91 Supplementary Statistics questionnaire; 3) report on the 1989-90 Supplementary Statistics; 4) report on the 1990 Salary Survey optional data categories; 5) final report to the Andrew Mellon Foundation on the ARL Database Development Project; 6) custom tables showing ARL member responses to the ALA Survey on Alternative Sources of Revenue in Academic Libraries; and 7) updated fact sheet on ARL statistical services and publications. Within the ARL office, a thorough manual was completed documenting processing and procedures to be followed by support staff working on different elements of the statistics program.

Technology applications. ARL staff and committee members are still investigating the development of "compiled" software to speed statistical data collection and verification. ARL staff have prepared a proposal to solicit funds to contract for a complete redesign of the input and output software used to compile and produce the ARL statistics and preservation statistics. Software improvements would allow easier incorporation of new measures, better error-checking, and faster turn-around of both the printed and machine-readable versions. ARL's collaboration with the IPEDS project [see below] has given the opportunity to see one model of such an application to library data. Over the summer, an electronic mail list server was established for the ARL Statistics Committee under the auspices of the University of Nebraska, and basic programming upgrades were carried out to enable integration of new statistical variables.

ARL Statistics. Publication of the machine-readable versions of historical data for law and medical school libraries, and of the annual statistics for ARL and law/medical libraries, has been proceeding; disks and documentation should be distributed by the end of the year. A special contract was carried out by the University of Virginia Library over the summer of 1991 to standardize, verify and input the remaining years of very complex and inconsistent law library data. The Statistics Committee will consider whether to published a consolidated set of the tables showing library expenditures as a percentage of university educational and general ("E&G") expenditures for the past ten years. These data continue to be used by a variety of libraries, and by members of the higher education and publishing communities; they were used in June 1991 to help in responding to proposals for a government cap on indirect cost rates for universities.

Government documents. The issue of whether and how to count government documents in the ARL Statistics has been discussed extensively by the Committee, which came to a consensus on an approach that was announced at the May 1991 membership meeting. It was also disseminated for comment from government documents librarians via ALA-GODORT, the GOVDOC-L electronic bulletin board, and the ALA-NCES IPEDS Advisory Committee. In June, this definition was adopted by the IPEDS Advisory Committee; since the Association of College and Research Libraries has traditionally used the ARL questionnaire *in toto*, most major academic library statistics surveys in North America will be using the same definition:

First, the definition of "cataloged" documents that may be counted in Line 1, Volumes Held, is extended to include those made accessible via tape-loaded or other item-level records, even if the collection is separately housed and not given LC classification. Several formulas may be used to convert among pieces, linear feet and volumes. Second, it is recommended that ARL libraries include documents in their counts of current serial titles and of microform pieces. Third, a new question has been added to the questionnaire asking for a piece count of all government documents not already counted in one of the above categories. This count will not be added to

a library's "total volumes" figure. Local, state, federal and international documents are to be included, both serials and monographs.

Access issues. The Statistics Program is continuing to look at access measures, facilities, and measures related to automation and electronic resources. Two new instruments were devised in 1991 to collect measures of access and service: a group of questions as part of the supplementary statistics, and a separate inventory to be issued every few years on library services and facilities (to be distributed in November). The supplementary questionnaire will attempt to document non-book resources, OPAC searches, database services, degree of retrospective conversion, reference, circulation, and bibliographic instruction. The "inventory of library characteristics and access measures" will record information about seating capacity, remote storage usage, automation equipment, resource sharing agreements, document delivery, and other remote or specialized public services. ARL is also exploring a survey to be conducted in collaboration with the Pennsylvania State University Libraries to develop documentation on the physical characteristics, costs and utilization of library facilities.

Salary Survey and Preservation Statistics. An analysis of the one-time optional questions on the 1990 *Annual Salary Survey* (degrees earned, age, detailed job codes, etc.) was distributed to members in the spring. Of particular interest have been some of the tables showing correlations among degrees earned, sex, and job categories; data have been applied to defining desired qualifications for job applicants at a member library, and to analyses of the employment of those holding the Ph.D. in library science. Survey forms for the 1991 salary survey were distributed in late July, returning to the base set of questions. The 1989-90 *ARL Preservation Statistics* were published and distributed in July (see page 13). Data gathering for the 1990-91 ARL Preservation Statistics is underway. Publication of the 1990-91 report is expected in late spring 1992.

Liaison with external statistical programs. ARL has actively sought to engage with other library and higher education data gathering efforts. CAUSE was given permission to use selections from the 1989-90 *Statistics* in workshops on metrics. Sarah Pritchard participated in two sessions of the annual meeting of the American Council of Learned Societies, which focused on data collection in the humanities. Ms. Pritchard also met with senior staff from the National Research Council's Office of Scientific and Engineering Personnel, together with representatives from the Department of Education's National Center for Educational Statistics and the Office of Library Programs, to discuss the inclusion of library data in a statistical assessment of research doctoral programs. Staff conferred on technical, procedural and policy aspects of library statistics with representatives from NCLIS, NISO, the Federal Library and Information Center Committee, the ALA Office for Research and the Association of College and Research Libraries, the Canadian Association of Research Libraries, and local consultants including Research Associates of Washington, which publishes the "Higher Education Price Index" and the "Library Price Index," now entitled *Inflation Measures for Schools and Colleges.*

IPEDS Academic Library Statistics. ARL continued to participate in a project coordinated by the National Center for Education Statistics, NCLIS, and the ALA Office for Research to improve the academic library statistics collected by the NCES Integrated Postsecondary Education Data System (IPEDS). Kent Hendrickson and Kendon Stubbs of the ARL Statistics Committee, and Sarah Pritchard, ARL program officer for statistics, represent ARL on the advisory committee. The committee concluded its series of revisions to the 1992 forms and made significant progress on new measures for 1994, with particular attention to more detailed categories for automation resources, expenditures and services. In an important move toward national consistency in data gathering, the IPEDS Advisory Committee agreed to adopt the new method of incorporating government documents as proposed by ARL.

II. Communications and External Relations

The communications capability is designed to apprise ARL members of current developments of importance to research libraries, inform the library profession of ARL positions on issues of importance to

research libraries, influence policy and decision-makers within higher education and other areas related to research and scholarship, and educate academic communities concerning research library issues. Within this capability is the coordination of ongoing efforts across all program areas to maintain and extend ARL's relationships with other organizations in the scholarly community.

Program development. The integration of the new Communications Specialist into all aspects of ARL publishing and communications resulted in a significant increase in productivity. Activities undertaken in the past six months to improve the skills and resources within that office included attending training and conference sessions on computer hardware and software, publications production, and association communications; extending in-house design capabilities; conferring with several printing firms to assess the applicability of various traditional and new technologies; and consolidating ARL files of press clippings, publications reviews, and photographs. Providing communications support across Executive Office capabilities, the Communications Specialist worked with program staff in preservation, the Office of Scientific and Academic Publishing, and the federal relations and information policy areas to produce a series of new reports and brochures (see descriptions under those headings). The publications catalog and strategic plan were updated and reformatted, and the policy on distribution of publications was clarified.

Newsletter. Issues number 157 and 158 appeared for July and September 1991. Beginning with issue no. 159, the position of senior editor will change. Brigid Welch, who oversaw the successful transition to and systematization of the expanded and redesigned *ARL: A Bimonthly Newsletter of Research Libraries Issues and Actions*, will relinquish those duties to devote her fullest efforts to the development of OMS information and administrative services. Jaia Barrett, director of the Office of Research and Development, will be the new editor and Pam Bixby will continue as managing editor.

Minutes of the Meeting. A concerted effort on the part of series editor Pamela Bixby resulted in getting the publication schedule of the *Minutes* back on track. *Higher Education Reform in the 1990s: Minutes of the 116th Meeting* (May 1990) was published in May, followed in August by *Exploring the Future of Information Services* (October 1990). The text of *"Is the Library a Place?" Minutes of the 118th Meeting* (May 1991) is in the final stages of production and will be distributed, bearing a redesigned cover and page format, by early December. At current staffing levels the *Minutes* should remain on a six-month schedule.

Relations with the press and publishing community. A new database for press release lists was designed and put into operation by the Communications Specialist. Press releases were issued in the last several months on an ARL resolution on rising serials costs; the new *Directory of Electronic Journals, Newsletters, and Scholarly Lists*; Mellon and NEH grants for ARL projects in foreign acquisitions and preservation, respectively; the departure of Jeff Gardner and arrival of Jaia Barrett; and the naming of ARL visiting program officer, Dr. Dan C. Hazen. Press coverage included notes and articles in the *Chronicle of Higher Education, American Libraries, Library Journal, LJ Hotline, ACLS Newsletter, CAUSE/EFFECT*, the *Journal of Library Administration*, and *College and Research Libraries*. Recent inquiries about ARL programs and policies have come from the *Kansas City Star*, the *National Journal*, and the College Press Syndicate in Orlando, Florida. Reviews of ARL publications have appeared in the *Journal of Academic Librarianship, Library and Information Science Research*, the *Wilson Library Bulletin, ALCTS Newsletter, C&RL News, Library Personnel News, Library Quarterly*, and *Preview*. Members are requested to alert ARL staff to press reports in local and student newspapers and specialized media.

The Executive Director and staff assisted in a revision of the "research libraries" section of the *World Book* article on libraries. Several publishers consulted with ARL about the use and interpretation of library materials statistics, including Williams & Wilkins and John Wiley. ARL maintained active membership in the Association of American Publishers, the Association of American University Presses, and others; more is documented in the section on the Office of Scientific and Academic Publishing.

Relations with the scholarly community and external groups. Collaboration on both technical and policy levels has become an ongoing pattern and is documented under all individual capabilities. Activities at

the executive level during this period included several meetings with the National Humanities Alliance, the Association of American Universities, the American Council on Education and the American Council of Learned Societies. The office explored the possibility of joining Independent Sector, a federation of nonprofit organizations that includes several other library and higher education associations with which ARL maintains relations. Noting the well-received recent initiative to bestow honors from the Association (e.g. Professor Barschall and Senator Pell), the ARL Board of Directors established a formal policy on awards to recognize contributions to research library issues made by persons external to the profession; the Board encouraged ARL members and committees to make recommendations for such awards and the policy was published in the September newsletter.

At the meeting of the ARL Board of Directors in July 1991, John Hammer, executive director of the National Humanities Alliance, was invited to discuss the nature of his organizations and the areas of shared interest between NHA and ARL. The Board also endorsed the application of ARL to become an official "affiliate" member of the American Council of Learned Societies. The ARL Executive Director made formal presentations on the issues facing research libraries at meetings of the American Council on Education and the Association of American Universities. The Associate Executive Director attended ACLS meetings on data collection in the humanities, and spoke on research library trends and ARL programs before the National Home Library Foundation and the Library of Congress Intern class.

Electronic communications at ARL. Several ARL committees are now utilizing list servers and online conferences to pursue their program areas, established through the support of various member libraries. Electronic publishing has become a reality with a disk-based version of the *Directory of Electronic Journals, Newsletters and Academic Discussion Lists* issued by the OSAP. With the advent in July of Craig Summerhill, the CNI/ARL Systems Coordinator, progress was made on further extending communications and file-sharing linkages. Summerhill and Paul Peters, director of the Coalition for Networked Information, oversaw the installation of the DEC Ultrix server at the headquarters offices; when fully operational in the fall, the server will function as a node on the Internet and may support expanded electronic mail and information services.

III. ARL Membership Meetings

The ARL membership meeting capability is designed to develop programs on topics of interest to ARL membership, schedule and manage meetings and activities, coordinate on-site local arrangements, and evaluate the success of these meetings. The May meeting emphasizes a topical program, coordinated by the ARL President-elect; the October meeting focuses on internal finances, elections and strategic planning.

May 1991. The Spring membership meeting was held in conjunction with that of the Canadian Association of Research Libraries in Montréal, Québec. The theme of the meeting was trends in library facilities, headlined by the question, "Is the Library a Place?" Speakers included architects, consultants and library directors addressing recent building trends, how buildings support a particular vision of the future of a library, and issues in politics and planning. Friday morning plenary sessions focused on national library organizations in Canada; cultural diversity in libraries and the profession; and library management responses to budget cutbacks. The meeting was highlighted by extensive participation by Canadian members and guests, an array of local events and library tour offerings, and a fully bilingual program booklet.

October 1991. The Fall membership meeting will again present a framework for developing consensus on strategic directions for ARL action on research library issues. Assessing the needs of libraries facing both new programmatic demands and fiscal constraints at local and national levels, ARL committees will lead discussions related to the impact on, and possible responses from, their areas of expertise (for example preservation, collection development, access to research resources). The meeting will be held at the Mayflower Hotel in Washington, D.C., October 23 to 25, 1991. The Howard University Library will host the opening reception with welcoming remarks

from university president Dr. Franklyn Jenifer. Guest speakers will be featured at lunch and dinner events: Richard Lucier of the University of California-San Francisco, speaking on "knowledge management," and David Bartlett, president of the Association of American University Presses, addressing trends in university publishing and areas of potential collaboration with research libraries. A panel on "Foundation Trends" will include David Penniman of the Council on Library Resources, Richard Ekman of the Andrew W. Mellon Foundation, and Loren Renz of the Foundation Center.

May 1992. Charleston, South Carolina is the location of the 120th meeting, launching ARL's sixtieth anniversary year. The University of South Carolina will host a reception in one of the city's restored historic houses. Topics being considered for the central program include library education, and library fund development. In addition, concurrent sessions will be offered to involve directors in potential ARL committee initiatives; discussions might cover, for example, mass deacidification planning, minority recruitment, "total quality management," scientific and technical information services, access measures for library evaluation, and foreign acquisitions.

The 1993 meeting will be hosted by the University of Hawaii and will be held at the Hilton Hawaiian Village in Honolulu, Hawaii, May 3 to 7, 1993; the May 1994 meeting will be hosted by the University of Texas-Austin.

IV. Governance

The capability for governance of the Association is intended to represent prudently the interests of ARL members in directing the business of the Association. The governing body is the ARL Board of Directors. The functions of the Board include: to establish operating policies, budgets, and fiscal controls; to approve long-range plans; to modify or clarify the ARL mission and continuing objectives; to monitor performance and the succession of the Executive Director; and to represent ARL to the community. The staff role in this capability is to provide information to the Board adequate to fulfill its responsibilities in a knowledgeable and expeditious manner. The Board establishes several committees to help achieve effective governance of the Association.

New Committees. An *Advisory Committee on the Office of Management Services* has been formed. First appointed in July, the Advisory Committee reports to the Management Committee and meets for the first time at the October 1991 membership meeting. Joanne Euster will serve as Chair, and Susan Jurow will staff the committee whose charge is to advise OMS on ongoing operations and provide assessments of program effectiveness and financial plans. The appointment of the OMS Advisory Committee will allow the Management Committee to focus on a broader range of issues.

Scientific and Technical Information Task Force. The Task Force report with recommendations for Board action was accepted by the Board at the May meeting. ARL staff have explored the next steps in the implementation of these recommendations. The Board recommended in July maintaining a small group active at a base level, to be ready to respond to initiatives from other organizations such as LC or NSF.

Membership. The Membership Committee chaired by Jay Lucker reported on its review of the membership potential of the Cleveland Public Library at the July Board meeting. The work of the committee was concluded, and a new Membership Committee convened to review the membership qualifications of the Auburn University Library. The new committee is chaired by Margaret Otto.

Emerging issue areas: Library Education. The ARL Board monitors developments related to ARL strategic objectives to determine whether new capabilities, committees, or projects are needed within the ARL framework. In May 1991, the Board received a request from Russell Shank, chair of the ALA Special Committee on Library School Closings, for a statement of current ARL policy or interest related to library education. The ARL staff prepared a summary of past ARL work in this area, appending a copy of the Statement on Library Education

adopted in 1986. In July the Board discussed the report submitted by Dr. Shank's committee and the ALA Draft "Standards for Accreditation," both in the process of being reviewed by ALA Council and committees. The Board further directed ARL staff to prepare a brief analysis of possible ARL responses to the library education issue, outlining strategies, types of work groups, products that might be sought, and costs.

In a related measure, the Executive Committee named three ARL directors to the Advisory Committee on Library Education that Warren J. Haas is convening for the Kellogg Foundation. Jim Neal, Nancy Cline, and Meredith Butler have been named to the academic library panel; there is also a panel for public and one for special libraries.

Status reports on standing committee and selected advisory and project group activities follow:

Committee on Information Policies:
Chair, Merrily Taylor; Staff, Prue Adler
1991 Agenda of issues: U.S. government information policies, reauthorization of HEA, NREN legislation, telecommunications, copyright law, and issues surrounding intellectual property concerns in an electronic environment.

Committee on Access to Information Resources:
Chair, Nancy Eaton; Staff, Jaia Barrett
1991 Agenda of issues: reconceptualization of cataloging in an electronic age, supporting and monitoring the bibliographic control efforts of the Library of Congress and NCCP, extending cooperative cataloging, gathering information on ARL membership cataloging priorities and policies, determining public services issues and actions for ARL.

Committee on Research Collections:
Chair, Charles Osburn; Staff, Jutta Reed-Scott
1991 Agenda of issues: oversight of NCIP and the foreign acquisitions project, and consideration of the impact of information technology on collection development strategies.

Committee on Preservation of Research Library Materials:
Chair, William Studer; Staff, Jutta Reed-Scott
1991 Agenda of issues: promoting use of permanent paper, advancing the development of a North American strategy for preservation, analysis of preservation statistics, and continuing retrospective conversion of the National Register of Microform Masters (NRMM).

Committee on the Management of Research Library Resources:
Chair, Joanne Euster; Staff, Susan Jurow
1991 Agenda of issues: review of training needs of research libraries, facility planning and development, operation of OMS Program Advisory Committee, and consideration of library staffing initiatives.

Committee on Scholarly Communication:
Chair, Paul Gherman; Staff, Ann Okerson
1991 Agenda of issues: encouragement of electronic journal experiments, strategy development in the area of scholarly publishing, promotion of change in management of intellectual property rights, advance alliances with other higher education groups.

Advisory Committee on ARL Statistics:
Chair, Kent Hendrickson; Staff, Sarah Pritchard
1991 Agenda of issues: collecting and displaying comparable data on government documents collections, implementing access measures, developing machine-readable formats and software for data collection, refining automation-related measures.

Task Force on Minority Recruitment:
Chair, Joseph Boissé; Staff, Susan Jurow
Assignment: to develop policies and proposals for ARL initiatives in the areas of recruitment, retention, and workplace integration of minorities in professional positions in research libraries.

Working Group on Future Online Library Information Systems:
Chair, Paula Kaufman; Staff, Jaia Barrett
Assignment: to develop a planning process leading to a "white paper" on research library future needs for online library information systems.

Advisory Committee on the Office of Management Services:
Chair, Joanne Euster; Staff, Susan Jurow
Assignment: to advise on strategy development for ongoing operations, provide guidance in performance and program effectiveness assessment, and review OMS budget and financial plans.

V. Management Services (Office of Management Services (OMS))

This capability encompasses the provision of consulting, training and publishing services on the management of human and material resources in libraries. The activities are carried out through the Office of Management Services, including OMS Consulting and Organizational Development Program, OMS Information Services Program, and OMS Training and Staff Development Program. The Advisory Committee on the OMS, reporting through the Committee on the Management of Research Library Resources, oversees and advises on the work of OMS, assists in the development and evaluation of programs, and recommends OMS policy and priorities.

OMS Consulting and Organizational Development Program: Activities related to the conduct of institutional studies and consultations. It provides programs for libraries to study their internal operations systematically and develop workable plans for improvement. During this period, several projects were in various stages of operation:

- *Leadership Development and Planning Programs:* Harvard University, Rice University, SUNY-Stony Brook, University of British Columbia
- *Technical Services Planning Programs:* Stanford University School of Business
- *Special Consultations:* Library of Congress, University of Arizona

OMS Information Services Program: The OMS Information Services Program gathers, analyzes, and distributes information on contemporary management techniques through the Systems and Procedures Exchange Center (SPEC); conducts surveys and analytical reviews; and answers inquiries on library issues and trends.

Quick-SPEC Surveys Completed. ARL members requested Quick-SPEC surveys on the following topic: designated ranks for librarians.
Quick-SPEC Surveys Planned. Quick-Spec surveys are planned for the remainder of 1991 on total quality management practices and on serials cancellation projects. Tallies of surveys are available upon request to all libraries responding to the Quick-SPEC surveys. Other interested ARL members can request copies and documentation for a minimal charge.
SPEC Kits Completed. The following SPEC Kits have been completed and distributed: *Expert Systems; Staff Recognition Programs; Library Information Desks; Technical Services Training Programs; Scholarly Information Centers; Library Services for People with Disabilities; Organization Charts of ARL Libraries.*
Upcoming SPEC Kits. *Collection Development Performance Evaluation; Insuring Library Collections; Organizat*

ion of Access Services; Library Development and Fund Raising; Salary Setting for Professionals; Librarians' Status Systems.
Upcoming SPEC Surveys. Professional Benefits Packages; Processing Government Documents; Flexible Workplace Policies.

OMS Training and Staff Development Program: A comprehensive program of organizational and individual training and consulting to help libraries find better ways of developing their human resources.

Two new programs, *Update I: Building Effective Performance* and *Update II: Managing Priorities and Making Decisions*, were developed and announced. The consecutive, two-day programs are designed to build on topics discussed in the *Basic Management Skills Institute*. Completion of a *Basic Management Skills Institute* is a prerequisite for registration in either *Update* program. The first Update programs are to be presented in Washington, November 18-21.

During this period, the following training events were conducted:

Basic Management Skills Institutes:
September 9-12, University of Manitoba and University of North Dakota
September 16-19, Library of Congress Interns
September 24-27, Los Angeles
October 28-31, University of Miami

Advanced Management Skills Institutes:
July 15-19, American Association of Law Libraries
October 20-25, Tucson, AZ

Training Skills Institute:
August 6-9, Chicago

Special Focus Workshops:
June 27, Georgia State University, Organizational Design
September 11, Library of Congress Interns, MBTI
September 23, Calgary Public Library, Professional Renewal
September 24 and 26, Canadian Library Association, Professional Renewal
September 27, University of British Columbia, Coaching
October 9-11, Rome, Italy, Conspectus

Scheduled programs remaining in 1991 include:

Basic Management Skills Institute:
November 11-14, University of Texas, El Paso
December 2-5, Guelph
December 9-12, New York Public Library

Collection Evaluation Institute:
November 20-22, Berkeley

Update I and Update II:
November 18-21, Washington

Seminar for ARL Directors, October 26:
OMS contracted with Dr. Lee Bolman of Harvard University to conduct an all-day

seminar for ARL Directors following the October ARL Membership Meeting. Based on his book, *Reframing Organizations: Artistry, Choice, and Leadership* (Jossey-Bass, 1991), Dr. Bolman will outline how a senior manager can improve his or her effectiveness by expanding the repertoire of strategic approaches and problem-solving styles.

Video Loan Program. In 1989 OMS launched a video loan program in response to expressions of interest from personnel and staff development officers in ARL libraries. The program's goal is to make management videos available to libraries inexpensively. Currently, there are 30 different videos in the library and second copies of four titles. The program has 18 subscribers. Most libraries screen the videos during brown bag lunch seminars. OMS staff provide a quarterly newsletter to subscribers free of charge. The program is operating on a cost-recovery basis, with income used to purchase new videos or additional copies of popular titles.

ARL/OMS Conference Showcase Booth. The theme of this year's exhibit was "Innovative Uses of Networks and Networked Information by ARL Libraries." The University of Michigan Library and the University of Southern California Library both participated in the exhibit. USC's participation was partly supported by the *Chronicle of Higher Education.*

Committee Activities and Other Projects in support of ARL management and staffing objectives. An Advisory Committee on the OMS was appointed at the July 1991 Board meeting, and its first meeting will be held during the October membership meeting. Chaired by Joanne Euster and staffed by Susan Jurow, the committee will advise on the development of strategy for ongoing operational and programmatic efforts; provide guidance in the assessment of performance, the achievement of goals, and the effectiveness of programs; and review budget, financial plans, and strategies for the OMS.

At its July meeting, the Board of Directors extended and strengthened the charge of the Task Force on Minority Recruitment, and established it as a group that receives staffing and guidance through the Committee on Management of Research Library Resources. The Task Force has been asked to develop a series of policies and strategies for action by ARL and individual member libraries.

At the request of the ARL Management of Research Library Resources Committee, the OMS Information Services Program prepared a survey that was sent to ARL directors asking assistance in identifying issues of concern in the areas of management and administration. The survey was the basis for a strategy forum at the October ARL membership meeting.

Projects coordinated with the Office of Research and Development:

- Visiting Program Officer: Susan Barnard, Assistant to the Dean of Libraries at Kent State University, will work in the OMS for the fall. She will explore the implications of total quality management and its application to libraries.

- Cultural Diversity Project. Phase One of the H.W. Wilson Project on "Meeting the Challenge of a Culturally Diverse Environment" will be completed later in the fall (see page 21 for more information).

VI. Federal Relations and Information Policy Development

The Federal Relations and Information Policy Program is designed to: monitor activities resulting from legislative, regulatory, or operating practices and programs of various international and domestic government agencies and other relevant bodies on matters of concern to research libraries; prepare analyses of and responses to federal information policies; influence federal action on research libraries-related issues; examine issues of importance to the future development of research libraries; and develop ARL positions on issues that reflect the

needs and interests of members. This capability includes the ARL Information Policies Committee.

Summary of Activities:

Networking and telecommunications issues.

National Research and Education Network. The House and Senate have passed NREN legislation. Working to achieve passage of this landmark legislation, ARL, in collaboration with House, Senate, and agency staff, reviewed and commented on multiple draft bills and provided language detailing library and education roles in the emerging network. Language referring to the NREN and the role of libraries in the information infrastructure was also included in the **HEA** recommendations.

Regional Bell Operating Companies. ARL has reviewed and commented on draft legislation that would permit regional Bell telephone companies to manufacture equipment and provide information services. ARL will continue to monitor and review safeguards to ensure the most equitable access for all as the RBOCs move into information services delivery in addition to the current conduit role. Related activities of interest have been a series of workshops exploring **privacy**, encryption and security issues in networking, and working with congressional staff on S 266, a bill that would have provided federal officials greater leeway in monitoring electronic, voice, and data communications.

Information policy legislation and related actions. ARL is an active participant in the information policy arena. A number of new initiatives have been proposed that collectively could have serious ramifications for research libraries including new measures to impose user fees and license and/or copyright-like restrictions on government information plus exceptions to section 105 of the Copyright Act to permit copyright of selected government-produced software. Proposals to impose **user fees on government information** have garnered support in Congress as a means of generating revenue. ARL has written and spoken to members of Congress in opposition to these measures and has joined an informal coalition of information and library associations opposing such measures.

ARL maintains an ongoing involvement in the reauthorization of the Paperwork Reduction and Federal Resources Management Act of 1990. ARL, with other library, public interest, and education associations has endorsed **WINDO**, (HR 2772) a bill that seeks to provide a single point of access to government information via the GPO. ARL continues to work with **GPO** staff to identify government datafiles that could be disseminated electronically to depositories and to promote an Internet connection for GPO.

Staff continue to participate in ongoing reviews of **NTIS** including proposed modernization measures and opportunities for disseminating scientific and technical information via the NREN. At the **White House Conference on Library and Information Services**, Arthur Curley was an official delegate for ARL and Duane Webster and Prue Adler were honorary delegates.

HEA reauthorization and funding. ARL and ALA recommendations for reauthorization of HEA title II and title VI section 607 were accepted by the House Committee on Education and Labor following hearings on April 16. Higher authorization levels and an emphasis on networking and access to information resources were the new directions proposed by ARL and ALA. Higher education associations endorsed the recommendations and Reps. Owens, Kildee, and Reed introduced HR 3181, a bill to reauthorize title II programs on August 1. In support of HEA reauthorization, Merrily Taylor, University Librarian, Brown University testified before the Senate Subcommittee on Education, Arts, and Humanities.

The full report and the Executive Summary of *HEA Title II-C Program: Strengthening Research Library Resources: A Ten-Year Profile and An Assessment of the Program's Effects upon the Nation's Scholarship* by Samuel Streit, Assistant University Librarian, Brown University, were published. This concludes the H.W. Wilson Foundation-supported project. The *Executive Summary* was highlighted throughout the congressional hearings. ARL actively supported increased funding of HEA title II and LSCA programs and appropriation requests at other agencies including GPO, LC, NAL, NLM, and NEH. Both LSCA and HEA title II were fully funded and in some cases,

additional funds were allocated.

Copyright and intellectual property. ARL has written to members of the House and Senate expressing concerns about HR 191 and S 1581 that propose to permit federal agencies to **copyright software** developed by federal employees engaged in cooperative research and development agreements with non-federal parties. As introduced, these bills could restrict access to government information. In addition, Prue Adler is participating in the Congressional Office of Technology Assessment study, Computer Software and Intellectual Property that examines software issues.

ARL, with ALA, has submitted testimony for the record on S 1035 and HR 2372, bills that seek to clarify congressional intent relating to **fair use of unpublished materials.** The proposed legislation seeks to permit reasonable use of unpublished sources and materials by authors and publishers while addressing the concerns of software publishers. Finally, Prue Adler is the ARL representative on the Department of State Advisory Panel on International Copyright of the Advisory Committee on International Intellectual Property that meets regularly to discuss GATT, WIPO Copyright Program, and related copyright issues.

Rust v. Sullivan. The recent Supreme Court decision may have a profound influence on freedom of expression and on federally funded programs. ARL, with other members of the public interest, scientific, education, and arts communities, is seeking to minimize the impact of this decision on free expression. ARL is participating in an informal coalition on this issue and has also responded with ALA to recent Senate hearings on this topic.

Indirect costs. ARL developed a background paper on indirect costs and libraries at the request of the American Association of Universities. This brief paper was used to deflect congressional measures seeking to include libraries in a 26% administrative cost cap of the indirect cost allocation. Libraries were not included in the administrative cost cap portion of the indirect cost allocation.

National libraries. Activities included working with the staff of the LC, NAL, and NLM in support of FY 1992 appropriations requests. In addition, review and commentary of LC programs and new legislative initiatives including the S 1416, the LC fee for service proposal, and the proposed national center for science and technology. ARL coordinated with NLM on the Paperwork Reduction Act and Federal Resources Management Act of 1991, NREN legislation, and on scientific and technical issues.

Federal records issues. Activities include participation in an on-going federal records working groups (ARL, NARA, National Coordinating Committee for the Promotion of History) to discuss a myriad of issues stemming from the concerns over the disposition of federal records.

VII. Collection Services

This capability addresses the broad issues facing research libraries in the areas of collection management and preservation. The work of two ARL committees is covered by this capability: Research Collections, and Preservation of Research Library Materials.

ARL's collection development efforts are directed toward the program objective of supporting member libraries' efforts to develop and maintain research collections, both individually and in the aggregate. Strategies to accomplish the objective include: promotion of needed government and foundation support for collections of national importance in the United States and Canada; efforts toward improving the structures and processes needed for effective cooperative collection development programs, including the North American Collections Inventory Project (NCIP); provision of collection management consulting through the Collection Analysis

Program; and development and operation of collection management training programs.

ARL's preservation efforts support the strategic program objective of promoting and coordinating member libraries' programs to preserve their collections. Strategies in pursuit of this objective include: advocacy for strengthening and encouraging broad-based participation in national preservation efforts in the U.S. and Canada; support for development of preservation programs within member libraries; support for effective bibliographic control of preservation-related process; encouragement for development of preservation information resources; and monitoring technological developments that may have an impact on preservation goals.

Committee on Preservation of Research Library Materials

The Committee is pursuing a number of initiatives during 1991 to address preservation problems in research libraries. One dominant concern is monitoring developments relating to mass deacidification. In September 1991, ARL and the Northeast Document Conservation Center (NEDCC) jointly sponsored a two-day invitational Roundtable on Mass Deacidification; directors and/or staff from 17 ARL libraries participated in the meeting that provided an opportunity to assess current efforts and prospects for implementing mass deacidification programs. The Andrew W. Mellon Foundation provided support for the meeting and preparation of the proceedings, which will be published by ARL late in the fall.

Strengthening North American preservation programs is an ongoing Committee priority. The committee is working closely with Patricia Battin, President, Commission on Preservation and Access and George Farr, Director, Division of Preservation and Access, National Endowment for the Humanities, to address the myriad issues relating to preservation of research materials.

The Committee continued to monitor the preservation statistics program. The 1989-90 *ARL Preservation Statistics* was published in July. Efforts are currently underway to explore automating collection and processing of the data in future surveys. The Committee also provided a detailed summary of ARL's preservation efforts to the ARL Board of Directors. The Board reviewed the ARL preservation capability at its July meeting. Members of the Board concluded that ARL's preservation activities effectively support member libraries' efforts to develop and operate preservation programs.

Association for Information and Image Management. Sarah Pritchard represented ARL at the second annual meeting of the AIIM Library Ad Hoc Group, convened as part of the AIIM "Standards Week" in September. The group provides a forum to share information among representatives of organizations involved with microfilming and imaging standards and procedures in library contexts, and to propose new initiatives and collaborative links. Represented at the meeting were NISO, ALCTS, SAA, NARS, NIST, RLG, CPA, NEH, NLM, LC, NAGARA and other key institutions and organizations working in the field. Recent discussions have focused on microfiche as a preservation medium, target formats, bibliographic standards, education on the interpretation and implementation of standards, communication with the vendor community, and new technical developments such as sulfiting.

North American Collections Inventory Project (NCIP)

The North American Collections Inventory Project (NCIP) is operating on a cost recovery basis, providing training services and publications on-demand. A Special Focus Workshop on the Conspectus will be convened in Rome in mid-October. ARL and RLG continue to cooperate on the development and revision of Conspectus materials, and ARL is represented by Karin Wittenborg from the University of California, Los Angeles, on the RLG Sub-Committee on the Conspectus. Future activities include the publication of *NCIP News*, the distribution of a microcomputer-based Conspectus system developed at the University of North Carolina, and consideration of possible cooperative uses of the Conspectus in the areas of collection development and preservation.

Committee on Research Collections

The Committee has assumed responsibility for the oversight of the National Collections Inventory

Project, encouraging more participation and developing recommendations for the use of the inventory data to improve collection development coordination among member libraries and access to research collections. The area of foreign acquisitions is a high priority. The Committee will provide oversight for the Foreign Acquisitions Project, recently funded by the Mellon Foundation to study the publishing, acquisition, and usage patterns of research resources from outside North America. The committee will also be working closely with the new Scholarly Communication Committee to plan further steps in those areas. Another new direction will be to look at the impact of information technologies in collection development, whether as technical tools, new research materials, or resource sharing mechanisms.

Collection Services Projects coordinated via the Office of Research and Development: (see pages 22-23 for complete status reports)

- Mellon Foreign Acquisitions Project
- National Register of Microform Masters Retrospective Conversion Project
- NEH Preservation Planning Project
- Latin American Studies Project

VIII. Access and Technology

This capability addresses the myriad issues related to scholarly information resources. The work of two ARL groups is covered by this capability: Access to Research Information Resources Committee and the Task Force on Scientific and Technical Information. The former Bibliographic Control Committee has been reconstituted as the Access to Research Information Resources Committee. In addition to bibliographic control issues, the committee will address public service issues.

Committee on Access to Information Resources

Issues in this committee's domain include exploration of ways to improve bibliographic access to research materials, especially expanding subject access; considering strategies for reducing cataloging costs and extending cooperative cataloging programs; exploring the future of electronic resource sharing and delivery mechanisms for information; and supporting and monitoring the efforts of the national libraries in the area of bibliographic control.

As a follow-up to the spring 1991 ARL Cataloging Inquiry, the Committee is exploring the development of a distributed cataloging program that would link collection strengths to cataloging priorities. The Committee is also planning to conduct a survey of the ARL membership to gather information on the costs and funding of interlibrary loan.

In preparation for the Strategic Forum at the October Membership meeting, the Committee is preparing a white paper on the "Evolution of Electronic Resource Sharing." Based on the meeting discussion, the paper will be revised, and publication is expected late in 1991.

ARL Task Force on a National Program for Scientific and Technical Information

The ARL Task Force on Scientific and Technical Information submitted its report and recommendations to the ARL Board of Directors. The report recommends a stronger ARL presence in defining a national STI strategy and the establishment of a broadly-based Committee on Science and Technology Information Needs involving both ARL directors and key members of the scientific community. The Committee would act as a catalyst for advancing research library initiatives in the arena of access to STI. It would provide the organizational locus for

developing projects and coordinating ongoing ARL efforts across all capabilities. The Board responded positively to these recommendations and directed ARL staff to analyze the potential costs, structures, and funding options for implementation. Discussions are continuing with David Penniman, President, Council on Library Resources, to explore collaborative strategies. In October, the Board will appoint a small core committee to monitor continuing developments in a variety of arenas.

ARL Task Force on Telecommunications

The ARL Task Force on Telecommunications provided recommendations to the ARL Board of Directors relating to technology issues within ARL. These recommendations were developed at the request of the ARL Board and conclude the work of the Task Force. The recommendations identified several areas of need in the Association regarding the technology objective including the need for a focal point for coordinated management of technology-related projects and for technology issues to be addressed within ARL, the need for an operating plan to implement the technology objective, and finally, a need for additional forums for the membership in developing key technologically-related issues. The ARL Board of Directors accepted the recommendations of the Task Force.

The development of a background paper on issues for consideration in a campus information statement is ongoing in the Federal Relations and Information Policy capability.

Higher Education Information Resources Alliance

The ARL Board of Directors accepted an invitation by the boards of CAUSE and EDUCOM to join in a new venture known as the HEIRAlliance. Intended to be an evolving umbrella organization, the Alliance is a vehicle to bring together existing and new projects of the three organizations, to provide a coordinated framework by which its member organizations can seek common purposes and undertake common initiatives. Among the first projects proposed within the Alliance will be a joint newsletter or other communication strategy. Efforts also began to develop a closer working relationship between the Coalition for Networked Information and the National Telecommunications and Networking Task Force. The Board and the executives of the three organizations reviewed proposals to clarify governance, programmatic, financial, and administrative issues.

VIII. Office of Scientific and Academic Publishing

The objective of the Office of Scientific & Academic Publishing is to maintain and improve scholars' access to information. OSAP undertakes activities to understand and influence the forces affecting the production, dissemination, and use of scholarly and scientific information. The Office also maintains a continuing educational outreach to the scholarly community in order to encourage a shared "information conscience" among all participants in the scholarly publishing chain: academics, librarians, and information producers. The activities of this new office build on the results of the ARL Serials Prices Project and interest and research ongoing in the profession. This capability covers the ARL Committee on Scholarly Communication.

Activities described promote the objectives of OSAP in the following arenas:

- Education of librarians, scholars, publishers, and ARL staff about the process of scholarly communications and the roles of the participants;
- Building presence, understanding, and alliances between librarians and scholars;
- Fostering alternatives to the current process of scholarly information transfer to render information more accessible and affordable;
- Understanding and altering the underlying policy principles and issues related to scholarly communications.

Scholarly Communication Committee

This new committee is charged to monitor developments, determine critical issues requiring ARL attention, inform members, and design strategic responses that can serve to influence the future of scholarly communication. Specific elements of this charge include: monitoring developments in the scholarly publishing and electronic scholarly publishing arenas, advising on the plans and strategies of the ARL Office of Scientific and Academic Publishing, and developing a research agenda for scholarly publishing concerns.

The committee met for the first time at the May, 1991 ARL membership meeting in Montréal. Among its first actions was to draft a resolution presented to the ARL Board of Directors responding to the threats to the diversity of scholarly publication sources posed by the mergers of large scholarly publishing firms. The Committee worked closely with OSAP in the process of submitting comments to government regulatory committees reviewing such mergers. At the October membership meeting, the Committee will solicit discussion of future strategies and has invited speakers to address issues related to trends in university press publishing, and new document delivery strategies for scientific and technical information.

Learned and Not-for-Profit Networked Electronic Journal Publishers

On May 1st, OSAP convened a meeting of fourteen individuals from learned societies and government agencies committed to developing networked electronic journals. The objectives were to (1) explore current developments; (2) consider the relationship to libraries and end-users; and (3) introduce like-minded organizations with the possibility of future collaboration between them, and with ARL libraries. As a result, several of the participants are talking about combining some development work. ARL has identified organizations with whom to discuss potential collaborative projects.

Plans are under discussion between ARL/OSAP and the American Mathematical Society to develop a two-day workshop in 1992 for not-for-profit organizations about networked electronic journal publishing: what it is, where it is, and current issues.

Survey of Electronic Journal Use

On May 20th, OSAP mailed a survey on Access to Full-Text Electronic Periodical Articles to about 70 member libraries that had agreed to participate. The survey was designed by Thomas Kinney and Colleen Seale of the University of Florida Libraries, who will be compiling a report targeted for November release to ARL members. Its purpose is to gather information concerning current and planned access to full-text electronic periodical articles in ARL libraries, in order to determine to what extent libraries are currently providing access to full-text electronic articles; the reasons such access is being provided; and how ARL libraries are planning for increased use of full-text electronic article retrieval in the future. The survey will set a benchmark that can be referenced and updated later in the decade.

Society for Scholarly Publishing

The Society for Scholarly Publishing (SSP) met in Philadelphia, and on May 22, Ann Okerson convened a session on "Refereed Electronic Journals." Speakers at the session were James O'Donnell (Pennsylvania State University), co-editor, *Bryn Mawr Classical Review*; Joyce Sigaloff (Embryonics, Inc., New York City), publisher, *Journal of Reproductive Toxicology*; and Stevan Harnad (Princeton University), co-editor, *PSYCOLOQUY*. Speakers described their electronic journal projects, the circumstances that led them to make a commitment to networked electronic journals, problems and successes, and prognosis for the networked medium's potential for journal publishers. Discussion from the audience centered around archival and variant editions, and legitimization through indexing and abstracting services. Publishers in the audience were impressed with the number of scholarly sources on the Internet and at libraries' participation in this new distribution medium.

North Carolina State (Triangle) Planning Process for CLR Grant

More than eighty faculty, administrators, and librarians from the University of North Carolina at Chapel

Hill, NC State, and Duke attended a joint symposium and planning retreat on "Cooperative Information Resources Development in the Sciences and Engineering" on May 28 and 29. The primary goals of the project are to develop mechanisms for ongoing faculty participation in cooperative information resource development and to recommend a general policy framework in providing scientific information resources.

The retreat explored dimensions of the project with addresses by Triangle specialists, as well as Martin M. Cummings, Director Emeritus of the National Library of Medicine; Richard E. Lucier, then Director of the Laboratory for Applied Research, Welch Medical Library at Johns Hopkins University; and Ann Okerson, Association of Research Libraries. Areas explored were: legal and intellectual property issues, electronic data sources and databases, collaborative and multi-disciplinary research, information-seeking behavior, library collections, governance, and finance. A most critical issue of the meeting appeared to be that of academic ownership of intellectual creation. The ARL Scholarly Communication Committee will discuss the development of an ARL position on this matter in a future meeting.

Association of American University Presses

From June 20-22, over 400 delegates to the annual AAUP meeting gathered in Naples, Florida. Paul Gherman, Virginia Polytechnic Institute Libraries; Michael Keller, Yale University Libraries; and William Potter, University of Georgia Libraries addressed sessions and described changes in communication technologies, library expenditures, and scholars' knowledge-seeking patterns. Ann Okerson spoke at a plenary session about ownership of academically authored work and the rapid growth of networked electronic serials. ARL speakers encouraged university presses to consider closely this new academic medium and begin a series of steps to participate in it. Several press directors have discussed potential projects with ARL libraries.

Directory of Electronic Journals, Newsletters, and Academic Discussion Lists

On July 12th, OSAP released the first printed edition of its directory of networked academic serials. The directory contains listings for 27 journals; 83 newsletters, digest-newsletters and others; and 517 academic discussion lists, conferences, and bulletin boards. Entries feature complete descriptions and logon instructions. The introduction describes the history of the printed directory project, whose purposes are to:

1. Document the coming of age of the electronic network as a medium used vigorously and enthusiastically throughout the scholarly process.
2. Demonstrate the state-of-the-art of the "new serials" being created on the Internet.
3. Emphasize the central role of librarians as champions of networked information.
4. Open the networked academic world to anyone with a modem, time, and interest.

The publication acknowledges especially the contributions of the two editors, Michael Strangelove of the University of Ottawa and Diane Kovacs of the Kent State University Libraries, as well as the dedicated efforts of network facilitators: librarians, technology specialists, and the thousands of network editors, moderators, list owners, and contributors without whose content none of the material could exist.

As a result of this involvement, several other ideas have been generated, one of which would involve securing a grant to support the cataloguing of electronic serials. This would be done at Kent State University, utilizing evolving LC and NISO standards and entering records into the OCLC database. The grant would be located and administered by ARL.

The *Directory* is selling briskly and it appears that the first press printing of 1,000 copies may be sold out by the time of the ARL membership meeting. Plans are for a second edition early in 1992. Another tangible outcome is the interest generated by the directory on the part of libraries and networks, for accessing and managing this new "serial" information. OCLC's NSF grant involves "grazing" through the Internet, creating a taxonomy of types of information, and making some handling recommendations. Ann Okerson participated in a kickoff meeting of this project on September 5th.

NASULGC resolution

The NASULGC is inviting members of the higher education community to form a task force to study current problems of journal access and pricing. OSAP is part of the planning and discussions in this matter, which may be pursued in collaboration with the National Academy of Sciences.

Press coverage of these issues has included:
Publishers Weekly covered both the SSP (July 12) and the AAUP meeting (August 2);
Chronicle of Higher Education did a clip on the ARL Directory (September 4);
Chronicle of Higher Education published an article on refereed electronic journals (September 11).

Publications
1. *PACS Review* (an electronic scholarly journal), August 1991, "Electronic Journals: whence, when, and how."
2. *LOGOS*, July 1991, "Back to Academia? The case for American universities to publish their own research." (mailed to members)
3. *College & Research Libraries*, September 1991, "Without Feathers; Does Copyright Help Scholarly Dissemination of Ideas?"
4. In progress: article for special issue of *Serials Review* on economic models for electronic journals.
6. In progress: writeup of AAUP paper for *Scholarly Publishing*.

IX. International Relations

This capability covers monitoring activities, maintaining selected contacts, identifying developments on issues of importance to American research libraries, and sharing experience of North American research libraries that may contribute to the development of collections and services in research libraries internationally.

ARL staff and members participated in the unexpectedly historic **IFLA** Conference in Moscow in August. The ARL Board supported the successful candidacy of Robert Wedgeworth for election as President; Arthur Curley was the official ARL voting representative. Ann Okerson gave the ARL welcoming speech to the U.S. Caucus on behalf of Mr. Curley and attended other IFLA sessions including those of the IFLA Acquisitions Group. ARL directors newly elected to IFLA Standing Committees include: Joseph Boissé to the Section of University Libraries and other General Research Libraries and Emily Mobley to the Section on Interlending and Document Delivery. Other ARL Directors currently serving include Joseph Rosenthal and Marilyn Sharrow on the Section of University Libraries and James Billington on the Section of National Libraries. Duane Webster serves on the Roundtable for the Management of Library Associations.

Many international contacts have been made in connection with the work of the **Office of Scientific and Academic Publishing**. In addition to the IFLA group noted above, OSAP has met or corresponded with the German Library Association, the Council of Inter-University Libraries in Japan, the U.K. Serials Group, the U.K. Association of Learned and Professional Society Publishers, the Amsterdam-based STM Library Relations Committee, and the International Association for Publishing Education. Making visits to research libraries in Moscow and Kiev, Ms. Okerson provided direct assistance to the Ukrainian Academy (the national library) enabling them to link up to the Internet. The publication of the *Directory of Electronic Journals, Newsletters and Academic Discussion Lists* and the extensive electronic mail activity of the office have generated a large number of international inquiries and sales.

Two projects launched this summer through the ARL **Office of Research and Development** will involve several levels of international analyses and collaborations, both direct and indirect. The Andrew Mellon Foundation granted $195,000 for a study of foreign publishing and access to foreign information in North American research libraries. Harvard College Library, in collaboration with the Latin American Recon Project (a

group of 15 ARL libraries working to convert Latin American collections) is lending its support to conduct the Latin American Studies Assessment Project (see page 22). ORD may explore other avenues for international cooperation, for example, seeking funding to support international dissemination of ARL publications or professional staff exchanges.

ARL staff provided **briefings and information** to several library organizations and librarians from other countries. In May, John R. Brockman of the U. K. Ministry of Defence Library visited ARL to share information about his research on library cost models and performance indicators. In August, British librarian Caroline Wells met with CNI to discuss applications of library technology, and Dr. Ulrich Hofmann, professor of library science at the Hamburg Technical College, conferred with ARL staff about experiences with library strategic planning and statistics projects. ARL responds regularly to requests from the USIA's Visitor Information Service asking for assistance in setting up meetings and planning relevant itineraries for foreign librarians making professional visits to the United States. ARL provided complimentary mailing lists and directory information to the ACRL Research Committee, in support of their efforts to solicit funding to bring a group of international library science practitioners and researchers to the ACRL 1992 National Conference in Utah.

Staff answered written inquiries from the library of the Universitat Politècnica de Catalunya on the potential application of ARL statistical measures to libraries in Spain, and from the Biblioteca Nacional in Rio de Janeiro, Brazil, regarding preservation program models. The King Fahd National Library in Saudi Arabia, the Institute of Information Studies in Bangalore, India, and the library of the Central Institute for Scientific and Technical Information in Bulgaria sought general information and documents on the services and programs of ARL.

The **Alliance of Universities for Democracy** invited ARL to participate in a session on library and information services at their second annual conference to be held in Bratislava, Czechoslovakia, in November 1991. Sarah Pritchard, ARL Associate Executive Director, will deliver a paper on the role of multi-institutional and multi-country library associations in promoting library research and collaborative program development. As of July 1991, the AUD represents 38 Central and East European and 16 American universities and is receiving support from a mix of public and private sources in the U.S. and abroad. The conference is being coordinated by the East European Center at the University of Tennessee.

Extending the successful OMS Collection Evaluation Institute and the related sessions conducted in support of the North American Collections Inventory Project, Jutta Reed-Scott organized and led, along with Assunta Pisani of Harvard College Library and Mary Jane Parrine of Stanford University Library, a **Conspectus** workshop October 9-11 in Rome, Italy. The workshop was sponsored by the Biblioteca della Camera dei Deputati.

In July and August Executive Director Duane Webster travelled to Australia to conduct a new institute for forty-five key library leaders entitled "Reframing Library Organizations" under the auspices of the **Australian Information Management Association** in Canberra, Australia. Webster also presented three colloquia, drawing about one hundred participants in Canberra, Melbourne, and Sydney.

X. General Administration

General administration encompasses overall coordination and management of the Association, program planning and strategy development, staffing, financial planning and strategy, fiscal control, and secretarial support and office operations.

Financial status as of 8/91. The August financial report indicates that for all accounts combined the Association is 1.5% under budgeted expenses. While revenues for the Executive Office and the Office of Research and Development are meeting 1991 projections, there are continuing concerns about the level of revenue projected for the year by the OMS. The September financial report will be reviewed by the ARL Board of Directors at its meeting in October.

ARL 1992 Financial strategy. At the July meeting of the ARL Board of Directors a financial strategy for 1992 was approved that calls for meeting the expected increase in the annual costs of programs and operations by increasing membership dues by the projected level of the increase in inflation in 1991 (i.e. 4%). Key elements of the strategy include no growth in dues-supported programs and staff, an allocation to the permanent reserve, continuation of current allocation patterns among the Association capabilities and funding the planned relocation of ARL offices out the operating balance.

Personnel resources. ARL participated in the District of Columbia public schools' "Careers on the Mall" work-study program, and employed Lesley Douglas from Wilson High School as a part-time office assistant through the summer.

- On July 29, Craig Summerhill became the first CNI / ARL Systems Coordinator. Craig holds the M.I.L.S. from the University of Michigan, and a bachelor's degree in music education from the University of Nevada-Reno. Prior to coming to ARL he was the Acting Systems Librarian for the Washington State University Library in Pullman. The Systems Coordinator reports jointly to the Assistant Director of the Coalition for Networked Information and the ARL Associate Executive Director.

- Jeffrey Gardner left ARL as of September 6 to become the director of the Information Resources Department of the Radio Free Europe/Radio Liberty Research Institute. Jeff had been at ARL since 1973, first in the Office of Management Services and most recently as the first director of the Office of Research and Development. He played a key role in the development of ARL and OMS services including the Systems Procedures and Exchange Center (SPEC), the North American Collections Inventory Project (NCIP), and the Academic Library Development program. Jeff trained or consulted in over half the ARL member libraries.

- Jaia Barrett returned from a two-year leave of absence and assumed the vacancy in the directorship of the Office of Research and Development. Jaia first came to ARL from Duke University Library in 1984, and was named Assistant Executive Director in 1989. While on leave to accompany her husband on a foreign-service assignment in Germany, she accepted consulting assignments related to the development of the ARL strategic plan and the proposed information policy manual.

- In the Office of Management Services, Susan Barnard began a three-month residency as a Visiting Program Officer. Susan is on sabbatical leave from the Kent State University library. OMS Publications program assistant Stacy Steinke left on maternity leave in early September.

Office operations and systems. A sustained effort was made over the summer to investigate real estate options for the relocation of the ARL offices. Several brokerages were consulted and short-term exclusive representation agreements negotiated. Over twenty-four properties in the greater Dupont Circle neighborhood have been inspected to date. Proximity to the subway, other agencies and educational associations, and to meeting facilities are among the key factors in remaining in the same general location; the ARL Board explicitly discouraged moving to a building in either the Maryland or Virginia suburbs. ARL staff, real estate and investment advisors analyzed financial strategies including purchase, lease, and special financing packages such as industrial revenue bonds; the arrangement being pursued as most feasible is a lease with option to purchase. In October, space planning firms were consulted to develop a systematic space program specifying layout alternatives and facilities requirements. The conference room in the Executive Office, some of the last open space in the current offices, was rearranged and partitioned to provide a small office area for the new systems

coordinator.

With the advent of the CNI/ARL Systems Coordinator, ARL gained a one-third time support position to assist with office and telecommunications systems across a variety of technical platforms throughout the organization. Craig Summerhill assumed responsibility for managing hardware, systems software and applications programs, local vendor relations and maintenance services, troubleshooting, and consulting with staff about effective means for developing computer-based solutions to meet operational and programmatic needs. Among the highest priorities of this new office are installing and configuring the DEC Ultrix server for the CNI, implementing electronic mail and filesharing on the server, consolidating and coordinating ARL software and hardware records and acquisition, and assisting with the development of customized invoice/inventory software for ARL Executive Office publications fulfillment. ARL and CNI continue to receive generous courtesy services from the University of Maryland, both electronic mail through the UMDC computer node and technical support for the CNI server and Internet connections.

To achieve further cost control in the area of general office support, a thorough search was undertaken prior to signing a new photocopier lease agreement and a less expensive machine with comparable functionality installed. ARL's long-distance telephone service vendor implemented a series af access codes corresponding to the ARL budget account codes so that telephone usage can be more accurately tracked and billed for each capability.

The revision and updating of the ARL Policy Manual begun last year was completed in October. New manuals will be distributed to all staff and to incoming members of the ARL Board. Policies on Board and director orientation, staff benefits and leave, and the distribution of ARL publications were revised and clarified; new policies were added on staff communications and external activities, staff orientation, and ARL awards. All calendars, committee charges, and financial policies were updated. In June, a five-month effort to weed and reorganize the ARL central files was completed and twenty-three boxes of noncurrent committee and business files were inventoried and placed in storage.

XI. Research and Development

The ARL Office of Research and Development consolidates the administration of grants and grant-supported projects administered by ARL. The major goal within this capability is to energize the ARL research agenda through the identification and development of projects in support of the research library community's mission as well as the development of funding support for those projects. The ARL Visiting Program Officer project is a part of this capability.

I. Current and Completed Projects

H.W. Wilson Diversity Project. In August 1990, the H.W. Wilson Foundation awarded a grant of $30,000 to ARL for a project on "Meeting the Challenges of a Culturally Diverse Environment." The project focused on how libraries are responding to the increasingly diverse cultural backgrounds of user constituencies and library staffs. Kriza Jennings was recruited to staff the project half time. In collaboration with Susan Jurow, Director of OMS, Ms. Jennings made 17 site visits to interview people in public and academic libraries, library schools, higher education, and private industry about how their organizations have been affected by a culturally diverse population and what tactics had been employed to encourage understanding and respect among diverse groups. Ms. Jennings also participated in discussions at two ARL membership meetings and has also met with a number

of ALA groups concerned with the issue. Phase I of the project will conclude upon completion of a review of cultural diversity initiatives as reflected in the literature of business and industry, higher education, and libraries. This report is due to be released by the end of the calendar year.

A proposal for Phase II of this project has been submitted to the Wilson Foundation. This planning grant, if funded, will support the continuation of ARL's efforts in two priority areas: information services and training and consulting support. Also in development is a third proposal that would seek support for testing project materials in selected ARL libraries, revising the project's design and materials based on those tests, and making the program available to the general academic and research library community.

Andrew W. Mellon Foundation Foreign Acquisitions Project. This summer ARL was awarded $195,000 by the Andrew W. Mellon Foundation to support a study of issues surrounding the acquisition of foreign materials by research libraries. The two year project is intended to (1) increase our understanding of needs in the area of access to foreign materials; (2) develop a broad consensus of priorities; and (3) develop structures and procedures for research library cooperation in developing and maintaining foreign materials collections and/or access to such materials in foreign research libraries. The project will be undertaken in consultation with the Council of National Resource Centers and the American Academy of Arts and Sciences-Midwest Center. Jutta Reed-Scott, ARL Senior Program Officer for Access and Collections Services, will serve as project director; Jaia Barrett, Director of ARL's Office of Research and Development, will coordinate project activities with other ARL programs and serve as liaison to other interested organizations.

NEH Preservation Project. ARL has completed the NEH-funded project "Supporting Collection Preservation Planning in Research Libraries," which supported the participation of ten ARL member libraries in the Preservation Planning Program, the training of preservation specialists to serve as consultants on the PPP, and a formal evaluation of the PPP by Margaret Child. The evaluation of the project has underscored the need to revise and expand the PPP resources.

In June, NEH awarded ARL a new 18-month grant of $59, 933 to support the enhancement and revision of the PPP resources. With this new NEH funding, ARL will update the *Preservation Planning Program Manual* and *Resources Notebook*. The award will also support the development of a series of focused resource guides that will assemble guidelines, procedures, checklists, and technical documentation related to the major components of a preservation program. A key feature of the project is the participation of ten preservation administrators in carrying out major portions of this further enhancement of preservation planning materials for research libraries.

National Register of Microform Masters (NRMM) Recon Project. ARL, in partnership with the Library of Congress, is administering the "Creation of Machine-Readable Cataloging for the NRMM Master File." ARL is using the services of OCLC to produce the records. The Library of Congress is distributing the resulting tapes through its Cataloging Distribution Services. The goal of the project is the conversion into machine-readable records of approximately 470,000 monographic reports in the NRMM Master File, which represents the records for microform masters held by libraries, archives, publishers, and other producers.

As of September 30, 1991, OCLC has processed approximately 151,800 records and will complete conversion of approximately 258,000 records early in 1992. The final challenge is obtaining the needed supplementary resources to convert the remaining 160,000 NRMM reports. In June 1991, ARL submitted a grant proposal to accomplish the complete conversion of NRMM.

Latin American Studies Project. Dr. Dan C. Hazen, Selector for Latin America, Spain, and Portugal in the Harvard College Library, will serve as ARL Visiting Program Officer for a new Latin American Studies assessment project. Scheduled for completion in 1992, the Christopher Columbus Quincentenary, the project aims to evaluate the progress in providing machine-readable access to bibliographic records in Latin American studies in North American research libraries and to assess the extent to which past efforts and current RECON and preservation programs have addressed Latin Americanists' needs. ARL plans to publish the report of Dr. Hazen's investigation in fall 1992. The Harvard College Library is supporting Dr. Hazen's project. Additional

project budget support is provided by the Research Libraries Group and ARL libraries that have participated in the Latin America Recon Project.

II. NEW INITIATIVES UNDER DEVELOPMENT

Information Technology Issues in Research Libraries. Based on discussion with the ARL Board of Directors and two member groups—the Work Group on Future Online Library Information Systems and the Telecommunications Task Force—ARL staff developed the outline of three specific information technology projects. The three projects are: (1) technology applications training and consulting services with the OMS; (2) development of an ARL publishing program on technology applications (including electronic publishing); and (3) the "white paper" project proposed by the ARL Work Group on Future Online Library Information systems. At its July meeting, the ARL Board lent its support for all three projects. Staff will develop a sense of funding prospects by next February.

Appendix: Coalition for Networked Information (CNI)

The Coalition for Networked Information is entering its second year of operation with continued guidance from its three parent associations, ARL, CAUSE, and EDUCOM, and continued support from the many member institutions and organizations that have joined its Task Force. With new projects underway in a number of key areas, the Coalition is working towards its goal of promoting the creation of and access to information resources in networked environments in order to enrich scholarship and to enhance intellectual productivity.

A. Summary of Activities

Membership. At its April 1991 meeting, the Coalition Steering Committee set the dues for membership on the Coalition Task Force at $4,500 for the year July 1, 1991 - June 30, 1992. This represents a ten percent reduction as compared to last year and reflects the Coalition's positive year-end fund balance, sensitivity to the financial hardships that are being experienced by many members, and financial requirements of the Coalition's strong and ambitious program. Member institutions and organizations are renewing their support of the Task Force and new members from various sectors are joining. As of September, 1991, 147 organizations and institutions were members of the Coalition Task Force.

Strategy formulation. Leaders of three Working Groups called invitational meetings to assist in clarifying their groups' agendas and share state-of-the-art information.

At a meeting sponsored by the Working Group on Directories and Resource Information Services and hosted by RLG at Stanford University on June 3 and 4, 1991, participants came together to find common ground and to share visions of directory information and services on the Internet and proposed NREN. They heard reports on emerging technologies, discussed data elements for directory records, examined user needs, and outlined strategies for collecting directory information. Finally, they identified priorities for the Coalition's agenda.

The Teaching and Learning Working Group met in Phoenix on June 20, 1991 to identify its priorities and to facilitate a new leadership structure.

An ad hoc study group on standards for campus-wide information systems was convened by Clifford

Lynch, the leader of the Working Group on Architectures and Standards, and met on May 24 in Washington, D.C. The group agreed upon ways and means for combining the functions of the Z39.50 and CWISP "client/server" information retrieval protocols.

Results of these meetings are reflected in the Coalition's FY92 Priorities, described below.

Innovative Potential of the Network Medium. As a means of accelerating the efforts devoted to the transformation of scholarly communication, the Digital Equipment Corporation has agreed to fund a "visioning" project proposed by Clifford Lynch with the support of Karen Hunter of Elsevier and Peter Lyman of the University of Southern California. The project will explore and describe architectural frameworks and technologies for collaborative authoring, refereeing, editing, and publishing; for multimedia compound information objects that include sound, video, datasets, and executable algorithms; and for other capabilities that manifest the genuinely innovative potential of the network medium for scholarly communication. The project will also attempt to generate a shared understanding in a number of concerned stake-holding communities regarding the issues, priorities, and tools needed to effect this transformation.

Communications. The Coalition has begun issuing *News and Views from the Director*, which will be used as a means of providing up to date information on Coalition activities. The *Coalition First Year (March, 1990-June, 1991) Report* and *FY92 (July, 1991-June, 1992) Priorities* were issued and provide information respectively on the initial year of the Coalition and future objectives. The Coalition Network Server, described below, will be used as part of an overall communications strategy to reach a wide audience of those interested in networked information.

The Coalition continued to publicize its efforts through articles and columns in the *ARL Newsletter*, *Manage IT* (CAUSE), and *EDUCOM Review*. In addition, vision statements were published in *EDUCOM Review* and *CAUSE/EFFECT*.

Network Server. This fall, the Coalition will bring a network fileserver on-line on the Internet. The hardware, which consists of a DEC 5000/200 workstation, 1 gigabyte of magnetic storage, 32MB of working memory, two streaming tape drives for loading software and making system backups, and a SCSI CD-ROM device, was installed by Digital Equipment Corporation on August 21, 1991. The system is running the ULTRIX (DEC's version of the Unix) operating system, and will be connected to the Internet via a 56Kb connection to SURAnet. A BITNET link using the same 56Kb connection is being investigated.

Initially, the server will provide local delivery of electronic mail for the staff and leaders of the Coalition, ARL, and selected other related associations in the Washington, D.C. area. It will also provide electronic access to the Coalition's organizational documentation and project working documents for members of the Internet community via anonymous FTP.

A host of other uses of the file server are being actively investigated. They include maintaining a clearinghouse of electronic documentation on noteworthy network projects, providing an archive of selected electronic journals, and providing an archive of selected BITNET, Internet, and Usenet discussion lists, mail reflectors, and news feeds. The full text of all the the clearinghouse documentation and archives will be fully searchable. The selection of a search engine for these files is currently being addressed.

Fall 1991 Task Force Meeting. In order to maintain the Coalition's momentum on issues of modernization of scholarly publication, the Fall Task Force Meeting will focus on the theme of "Catalyzing the Flow of Networked Information." Scheduled for November 21 and 22, 1991, the program will address Coalition interests in and efforts regarding models of, architectures for, and relationships in the emerging networked information environment.

Presentations about and Representation of CNI. Creating awareness in professional communities about the opportunities and challenges of networked information resources and services continued to be a goal of the Coalition program. The Director and member leaders gave presentations around the country about networked

information and the Coalition's efforts and priorities. A sampling of meetings in which the Coalition was represented include the Internet Engineering Task Force, the Snowmass conference, the Texas State Networking Conference, RONDAC/OCLC, a Business Week Symposium on "information highways," the EDUCOM annual meeting, the ALA/ALCTS Serials Institute, and the NTIS Advisory Board.

In addition, the Coalition Director developed international contacts through a European trip which included attendance at a British networking conference and the first INET meeting, held in Copenhagen, Denmark in June, during which he organized a panel on networked information resources and services. He subsequently made a presentation at a British Electronic Networks and Publishing Seminar, sponsored by the Association of Learned and Professional Society Publishers and the Institute of Physics and met with the Management Committee of the Research and Development Department of the British Library and the staff of the United Kingdom Office of Library Networking. The Chair of the Coalition Steering Committee made a presentation at the Canadian Academic and Research Networking Conference in Kingston, Ontario, Canada.

B. Priorities for 1992. The Coalition's FY92 priorities are categorized by program theme and identify both broad issues and specific projects. Highlights for each theme follow:

Modernization of Scholarly Publishing. Networked scholarly journals; economic analyses of electronic and print formats; high-volume, networked printing (imaging) facilities; and the potential of a "uniform site licensing" program for networked information.

Transformation of Scholarly Communication. Requirements for innovative scholarly communication, including collaborative works and compound information objects; and networked information in the humanities, arts, and social sciences.

Directories and Resource Information Services. A "top node" directory of directories; data elements for directory records, including extension to the MARC formats; and, the National Science Foundation procurement for a new NSFNet Network Information Center.

Architectures and Standards. Linking bibliographic files to source material; a single standard for bitmapped image files; protocols for delivery of source material; mechanisms for authentication, accounting, and billing; and, networked printing utilities.

Legislation, Codes, Policies and Practices. A clearinghouse for positions and statements on networked information; model policies for the use of networks; and, social, professional, and legal structures for networked information.

Access to Government Information. The potential of networks for improving access to and delivery of data and information from governments; modernization of the US Government depository library system; and, the "GPO WINDO" initiative.

Teaching and Learning. Exemplary models of educational networking; development of information packets for new communities of network users; and, relationships with related associations and groups.

Management and Professional and User Education. Development of information packets for higher education administrators, faculty, and professionals; and, development of metrics for measuring institutional excellence in networked information

APPENDIX II
119th Membership Meeting

ATTENDANCE

Members	
University of Alabama	[not represented]
University of Alberta	[not represented]
University of Arizona	[not represented]
Arizona State University	Sherrie Schmidt
Boston Public Library	Arthur Curley
Boston University	John Laucus
Brigham Young University	Sterling J. Albrecht
University of British Columbia	Heather Keate [alt.]
Brown University	Merrily Taylor
University of California-Berkeley	Joseph Rosenthal
University of California-Davis	Marilyn J. Sharrow
University of California-Irvine,	
University of California-Los Angeles	Gloria Werner
University of California-Riverside	[not represented]
University of California-San Diego	Dorothy Gregor
University of California-Santa Barbara	Joseph A. Boissé
Canada Institute for Scientific and	
Technical Information	Bernard Dumouchel
Case Western Reserve	Tim Robson [alt.]
Center for Research Libraries	Donald B. Simpson
University of Chicago	Gerald Munoff [alt.]
University of Cincinnati	David Kohl
University of Colorado	James F. Williams II
Colorado State University	Joan Chambers
Columbia University	Elaine F. Sloan
University of Connecticut	Brinley Franklin [alt.]
Cornell University	Alain Seznec
Dartmouth College	Margaret A. Otto
University of Delaware	Susan Brynteson
Duke University	Jerry D. Campbell
Emory University	[not represented]
University of Florida	Dale B. Canelas
Florida State University	[not represented]
Georgetown University	Susan K. Martin
University of Georgia	William G. Potter

Georgia Institute of Technology	[not represented]
University of Guelph	John Black
Harvard University	Richard De Gennaro
University of Hawaii	John R. Haak
University of Houston	Robin Downes
Howard University	Ann K. Randall
University of Illinois at Chicago	Sharon A. Hogan
University of Illinois at Urbana	David Bishop
Indiana University	James G. Neal
University of Iowa	Sheila D. Creth
Iowa State University	Nancy L. Eaton
Johns Hopkins University	Scott Bennett
University of Kansas	William J. Crowe
Kent State University	Don Tolliver
University of Kentucky	Paul A. Willis
Laval University	Claude Bonnelly
Library of Congress	Winston Tabb
Linda Hall Library	Louis E. Martin
Louisiana State University	Jennifer Cargill
McGill University	Eric Ormsby
McMaster University	Graham R. Hill
University of Manitoba	Carolynne Presser
University of Maryland	Joanne Harrar
University of Massachusetts	Richard J. Talbot
Massachusetts Institute of Technology	Jay K. Lucker
University of Miami	Frank Rodgers
University of Michigan	Donald E. Riggs
Michigan State University	Hiram L. Davis
University of Minnesota	Thomas W. Shaughnessy
University of Missouri	Martha Bowman
National Agricultural Library	Keith Russell [alt.]
National Library of Canada	Ingrid Parent [alt.]
National Library of Medicine	[not represented]
University of Nebraska	Joan Giesecke [alt.]
University of New Mexico	[not represented]
New York Public Library	Paul Fasana
New York State Library	Jerome Yavarkovsky
New York University	Carlton C. Rochell
The Newberry Library	Charles T. Cullen
University of North Carolina	James F. Govan
North Carolina State University	Susan K. Nutter

Northwestern University	Lance Query [alt.]
University of Notre Dame	Robert C. Miller
Ohio State University	William J. Studer
University of Oklahoma	Sul H. Lee
Oklahoma State University	Edward R. Johnson
University of Oregon	George W. Shipman
University of Pennsylvania	Paul H. Mosher
Pennsylvania State University	Nancy Cline
University of Pittsburgh	Paul Kobulnicky
Princeton University	Donald Koepp
Purdue University	Emily R. Mobley
Queen's University	Paul Wiens
Rice University	Beth Shapiro
University of Rochester	James F. Wyatt
Rutgers University	Joanne R. Euster
University of Saskatchewan	Frank S. Winter
Smithsonian Institution	Barbara J. Smith
University of South Carolina	Arthur P. Young
University of Southern California	[not represented]
Southern Illinois University-Carbondale	Carolyn Snyder
Stanford University	Robert L. Street
State University of New York at Albany	Meredith Butler
State University of New York at Buffalo	Barbara von Wahlde
State University of New York at Stony Brook	John B. Smith
Syracuse University	David H. Stam
Temple University	[not represented]
University of Tennessee	Paula T. Kaufman
University of Texas -Austin	Harold W. Billings
Texas A&M University	Irene B. Hoadley
University of Toronto	Carole Moore
Tulane University	Philip E. Leinbach
University of Utah	Roger K. Hanson
Vanderbilt University	Malcolm Getz
University of Virginia	Kendon Stubbs
VPI and State University	Paul Gherman
University of Washington	Betty G. Bengtson
Washington State University	Nancy L. Baker
Washington University -St. Louis	Shirley K. Baker
University of Waterloo	[not represented]
Wayne State University	Peter Spyers-Duran
University of Western Ontario	[not represented]

University of Wisconsin -Madison	Kenneth Frazier
Yale University	Millicent D. Abell
York University	Ellen Hoffmann
Guests	
American Council of Learned Societies	Doug Greenberg
Andrew W. Mellon Foundation	Anthony Cummings
Andrew W. Mellon Foundation	Richard Ekman
Association of American University Presses/ Southern Illinois University	Richard De Bacher
Association of American University Presses/ Temple University Press	David Bartlett
CAUSE/University of California - Davis	Carole Barone
CAUSE	Jane Ryland
Commission on Preservation and Access	Patricia Battin
Council on Library Resources	Martin Cummings
Council on Library Resources	W. David Penniman
EDUCOM/Rice University	Priscilla Huston
EDUCOM	Kenneth King
Engineering Information, Inc.	Michael Gannon
The Foundation Center	Loren Renz
IRLA/Folger Shakespeare Library	Werner Gundersheimer
Library of Congress	Henriette Avram
Library of Congress	Kenneth Harris
Library of Congress	William Sittig
NEH Division of Preservation and Access	George Farr
National Humanities Alliance	John Hammer
OCLC Online Computer Library Center, Inc.	Wayne Smith
Research Libraries Group	James Michalko
U.S. Department of Education Office of Library Programs	Anne Mathews
University of California - San Francisco	Richard Lucier
University of Connecticut	Jan Merrill-Oldham
University of Massachusetts	Gordon Fretwell

ARL Staff

Adler, Prudence	Assistant Executive Director Federal Relations and Information Policy

Barrett, Jaia	Director, Office of Research and Development
Bixby, Pamela	Communications Specialist
Dikeos, Gary	Office Manager
Okerson, Ann	Director, Office of Scientific and Academic Publishing
Pritchard, Sarah	Associate Executive Director
Reed-Scott, Jutta	Senior Program Officer for Access and Collections Services
Webster, Duane	Executive Director

ARL Office of Management Services

Barnard, Susan	Visiting Program Officer
Jennings, Kriza	Diversity Consultant
Jurow, Susan	Director
Sullivan, Maureen	Organizational Development Consultant
Welch, Brigid	Senior Program Officer for Information Services and OMS Operations

Coalition for Networked Information

Lippincott, Joan	Assistant Director
Peters, Paul Evan	Director
Summerhill, Craig	CNI/ARL Systems Coordinator

INDEX

Abell, Millicent	Yale University
Adler, Prudence	Association of Research Libraries
Avram, Henriette	Brigham Young University
Tabb, Winston	Library of Congress
Baker, Nancy	Washington State University
Baker, Shirley	Washington University - St. Louis
Barnard, Susan	ARL - OMS/Visiting Program Ofcr.
Barone, Carole	CAUSE/University of California -Davis
Barrett, Jaia	Association of Research Libraries
Bartlett, David	Association of American University Presses/Temple University
Battin, Patricia	Commission on Preservation and Access
Bengtson, Betty	University of Washington
Bennett, Scott	Johns Hopkins University
Billings, Harold	University of Texas - Austin
Bishop, David	University of Illinois at Urbana
Bixby, Pamela	Association of Research Libraries
Black, John	University of Guelph
Boissé, Joseph	University of California - Santa Barbara
Bonnelly, Claude	Université Laval
Bowman, Martha	University of Missouri
Brinley, Franklin	University of Connecticut
Brynteson, Susan	University of Delaware
Butler, Meredith	State University of New York - Albany
Campbell, Jerry	Duke University
Canelas, Dale	University of Florida
Cargill, Jennifer	Louisiana State University
Chambers, Joan	Colorado State University
Cline, Nancy	Pennsylvania State University
Creth, Sheila	University of Iowa
Crowe, William	University of Kansas
Cullen, Charles	The Newberry Library
Cummings, Martin	Council on Library Resources
Cummings, Anthony	Andrew W. Mellon Foundation
Curley, Arthur	Boston Public Library
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De Gennaro, Richard	Harvard University
Dikeos, Gary	Association of Research Libraries

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Ekman, Richard	Andrew W. Mellon Foundation
Euster, Joanne	Rutgers University
Farr, George	NEH Division of Preservation and Access
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Franklin, Brinley	University of Connecticut
Frazier, Kenneth	University of Wisconsin - Madison
Getz, Malcolm	Vanderbilt University
Gherman,Paul	Virginia Polytechnic Institute and State University
Giesecke, Joan	University of Nebraska
Govan, James	University of North Carolina - Chapel Hill
Greenberg, Doug	American Council of Learned Societies
Gregor, Dorothy	University of California - San Diego
Gundersheimer, Werner	IRLA/Folger Shakespeare Library
Haak, John	University of Hawaii
Hammer , John	National Humanities Alliance
Hanson, Roger	University of Utah
Harrar, Joanne	University of Maryland
Harris, Kenneth	Library of Congress
Hill, Graham	McMaster University
Hoadley, Irene	Texas A&M University
Hoffmann, Ellen	York University
Hogan, Sharon	University of Illinois at Chicago
Huston, Priscilla	EDUCOM/Rice University
Jennings, Kriza	Association of Research Libraries
Johnson, Edward	Oklahoma State University
Jurow, Susan	Association of Research Libraries
Kaufman, Paula	University of Tennessee
Keate, Heather	University of British Columbia
King, Kenneth	EDUCOM
Kobulnicky, Paul	University of Pittsburgh
Koepp, Donald	Princeton University
Kohl, David	University of Cincinnati
Laucus, John	Boston University
Lee, Sul	University of Oklahoma
Leinbach, Phil	Tulane University
Lippincott, Joan	Coalition for Networked Information
Lucier, Richard	University of California - San Francisco

Lucker, Jay	Massachusetts Institute of Technology
Martin, Louis	Linda Hall Library
Martin, Susan	Georgetown University
Mathews,Anne	U.S. Department of Education Office of Library Programs
Merrill-Oldham, Jan	University of Connecticut
Michalko, James	Research Libraries Group
Miller, Robert	University of Notre Dame
Mobley, Emily	Purdue University
Moore, Carole	University of Toronto
Mosher, Paul	University of Pennsylvania
Munoff, Gerald	University of Chicago
Neal, James	Indiana University
Nutter, Susan	North Carolina State University
Okerson, Ann	Association of Research Libraries
Ormsby, Eric	McGill University
Otto, Margaret	Dartmouth College
Parent, Ingrid	National Library of Canada
Penniman, W. David	Council on Library Resources
Peters, Paul Evan	Director, Coalition for Networked Information
Potter, William	University of Georgia
Presser, Carolynne	University of Manitoba
Pritchard, Sarah	Association of Research Libraries
Query, Lance	Northwestern University
Randall, Ann	Howard University
Reed-Scott, Jutta	Association of Research Libraries
Riggs, Don	University of Michigan
Robson, Tim	Case Western Reserve University
Rochell, Carlton	New York University
Rodgers, Frank	University of Miami
Rosenthal, Joseph	University of California - Berkeley
Russell, Keith	National Agricultural Library
Ryland, Jane	CAUSE
Schmidt, Sherrie	Arizona State University
Seznec, Alain	Cornell University
Shapiro, Beth	Rice University
Sharrow, Marilyn	University of California - Davis
Shaughnessy, Thomas	University of Minnesota
Shipman, George	University of Oregon
Simpson, Donald	Center for Research Libraries
Sittig, William	Library of Congress

Sloan, Elaine	Columbia University
Smith, Barbara	Smithsonian Institution
Smith, Wayne	OCLC Online Computer Library Center, Inc.
Smith, John	State University of New York - Stony Brook
Snyder, Carolyn	Southern Illinois University - Carbondale
Spyers-Duran, Peter	Wayne State University
Stam, David	Syracuse University
Stubbs, Kendon	University of Virginia
Studer, William	Ohio State University
Sullivan, Maureen	Association of Research Libraries
Summerhill, Craig	Coalition for Networked Information
Tabb, Winston	Library of Congress
Talbot, Richard	University of Massachusetts
Taylor, Merrily	Brown University
Tolliver, Don	Kent State University
von Wahlde, Barbara	State University of New York - Buffalo
Webster, Duane	Association of Research Libraries
Welch, C. Brigid	Association of Research Libraries
Werner, Gloria	University of California - Los Angeles
Wiens, Paul	Queen's University
Williams, James	University of Colorado
Willis, Paul	University of Kentucky
Wyatt, James	University of Rochester
Yavarkovsky, Jerome	New York State Library
Young, Arthur	University of South Carolina

APPENDIX III

OFFICERS, BOARD OF DIRECTORS, COMMITTEES, AND TASK FORCES

ARL Officers and Board for 1991

Marilyn J. Sharrow	President
Arthur Curley	Vice President & President Elect
Martin Runkle	Past President
Harold W. Billings	(Oct. 1989 - Oct. 1992)
Jerry Campbell	(Oct. 1990 - Oct. 1993)
Joan Chambers	(Oct. 1990 - Oct. 1993)
Ellen Hoffmann	(Oct. 1988 - Oct. 1991)
Emily R. Mobley	(Oct. 1990 - Oct. 1993)
Susan K. Nutter	(Oct. 1989 - Oct. 1992)
Charles B. Osburn	(Oct. 1988 - Oct. 1991)
Thomas W. Shaughnessy	(Oct. 1988 - Oct. 1991)

Standing Committees and Task Forces

(Committee terms are based on calendar year)

Committee on Information Policies
Joseph A. Boissé (1990-92)
Susan Brynteson (1989-91)
Nancy Cline (1991-93)
John R. Haak (1989-91)
Ellen Hoffman (1989-91)
Paula T. Kaufman (1990-92)
Louis E. Martin (1990-92)
Carlton C. Rochell (1991-93)
Alain Seznec (1990-92)
Paul A. Willis (1989-91)
James F. Wyatt (1990-92)
Merrily E. Taylor (1989-91), Chair (1991-92)

Staff: Prue Adler

Committee on Nominations
Millicent Abell (1990-91)
Betty Bengston (1990-91)
Roger K. Hanson (1990-91)
Arthur Curley, Chair (1991)

Committee on Research Collections
Harold W. Billings (1990-92)
Dale B. Canelas (1991-93)
H. Joanne Harrar (1991-93)
John Laucus (1989-91)
Paul H. Mosher (1989-91)
William Sittig, Library of Congress Liaison
Barbara J. Smith (1990-92)
James C. Thompson (1989-91)
Paul Wiens (1989-91)
Charles B. Osburn (1989-90), Chair (1991-92)

Staff: Jeffrey Gardner

Committee on the Management of Research Library Resources
Meredith Butler (1990-92)
Jerry D. Campbell (1989-91)
Arthur Curley (1989-92)
Kent Hendrickson (1991-92) ex officio
Edward R. Johnson (1990-92)
Robert C. Miller (1991-93)
Donald Riggs (1990-92)
Elaine Sloan (1991-93)
Winston Tabb (1991-93)
Jerome Yavarkovsky (1989-91)
Joanne Euster (1989-91), Chair (1991-92)

Staff: Susan Jurow

Committee on Preservation of Research Library Materials
Kenneth Harris, Library of Congress Liaison
Scott Bennett (1990-92)
Donald W. Koepp (1988-90)
Carole Moore (1987-90)
Jan Merrill-Oldham (Consultant)
Joseph A. Rosenthal (1990-92)
George W. Shipman (1989-91)
Donald B. Simpson (1989-90)
William J. Studer, Chair (1991-92)

Staff: Jutta Reed-Scott

Committee on Access to Information Resources
Henriette Avram, Library of Congress Liaison
Shirley R. Baker (1990-92)
Calvin J. Boyer (1989-91)
Paul Fasana (1988-90)
William G. Potter (1991-93)
Marianne Scott (1989-91)
Barbara von Wahlde (1989-91)
Gloria Werner (1991-93)
Nancy L. Eaton (1990-92, Chair (1991-92)

Staff: Jutta Reed-Scott

Scholarly Communication Committee
Sheila D. Creth (1991-93)
Charles Cullen (1991-93)
Peter Spyers-Duran (1991)
Sharon A. Hogan (1991-92)
Susan K. Martin (1991)
Eric Ormsby (1991-92)
Beth Shapiro (1991-92)
Arthur P. Young (1991-92)
Paul Gherman, Chair (1991-92)

Staff: Ann Okerson

Task Force on Minority Recruitment
Shirley K. Baker
Meredith Butler
James F. Williams
Joseph A. Boissé, Chair

Staff: Susan Jurow and Kriza Jennings

Advisory Committee on ARL Statistics
William J. Crowe (1991-93)
Roger K. Hanson (1990-92)
Graham R. Hill (1989-91)
Irene B. Hoadley (1990-92)
Ernie Ingles (1991-93)
Gordon Fretwell (Consultant)
Margaret A. Otto (1990-92)
Kendon Stubbs (Consultant)
Kent Hendrickson (1989-91), Chair (1991-92)

Staff: Sarah Pritchard

Task Force on Telecommunications (1990-91)
John Black
Malcolm Getz
Paul Gherman
James F. Williams II
Nancy Cline, Chair

Staff: Prue Adler

Task Force on Future Online Library Information Systems (1990-91)
Charles E. Miller
Paul H. Mosher
Merrily Taylor
Paula T. Kaufman, Chair

Staff: Jeffrey Gardner

Task Force on a National Program for Scientific and Technical Information
Betty G. Bengtson
Joseph H. Howard
Jay K. Lucker
Susan K. Nutter
Martin Runkle
Marilyn Sharrow
Elmer V. Smith
Richard J. Talbot
Louis E. Martin, Chair

Staff: Jeffrey Gardner and Jutta Reed-Scott

Project to Support Collection Preservation and Planning in Research Libraries (NEH)
Jay K. Lucker
Carolyn Morrow, harvard University
Margaret A. Otto
John B. Smith

Representatives

Commission on Preservation and Access, Advisory Committee	William J. Studer
American Council of Learned Societies	D. Webster
Association of American Publishers	A. Okerson
Association of American Universities	D. Webster/P. Adler
Association of American University Presses	D. Webster/A. Okerson
CAUSE (College and University Systems Exchange)	D. Webster
Coalition on Government Information	P. Adler
Council on Library Resources, Grants Committee	D. Webster
EDUCOM	D. Webster
Eighteenth-Century Short Title Catalogue	Ray Frantz, Virginia
IFLA Voting Representative	D. Webster
LC Network Advisory Committee	D. Webster/P. Peters
National Humanities Alliance	D. Webster
National Information Standards Organization (NISO)	H. Joanne Harrar
National Information Standards Organization, Voting Rep.	D. Webster/J. Reed-Scott
National Institute of Conservators	David H. Stam
RLG Subcommittee on the Conspectus	George Soete, UC/San Diego
Society of American Archivists	Herbert Finch, Cornell
Society for Scholarly Publishing	A. Okerson

APPENDIX IV

MEMBERSHIP OF THE ASSOCIATION
October 1991

University of Alabama Libraries
Box 870266
Tuscaloosa, Alabama 35487-0266
Charles B. Osburn
Dean
(205)348-7561

University of Alberta Library
Edmonton, Alberta Canada, T6G 2J8
Ernie Ingles
Chief Librarian
(403)492-5569

University of Arizona Library
Tucson, Arizona 85721
Carla Stoffle
Librarian
(602)621-2101

Arizona State University Library
Tempe,Arizona 85287
Sherrie Schmidt
Dean of University Libraries
(602)965-3956

Boston University Library
Boston, Massachusetts 02215
John Laucus
Director
(617)353-3710

Boston Public Library
Copley Square
Boston, Massachusetts 02117
Arthur Curley
Librarian
(617)536-5400

Brigham Young University Library
Provo,Utah 84602
Sterling J. Albrecht
University Librarian
(801)378-2905

University of British Columbia Library
1956 Main Mall
Vancouver, B.C. Canada V6T 1Y3
Ruth J. Patrick
University Librarian
(604)822-2298

Brown University Library
15 Prospect Street
Providence, Rhode Island 02912
Merrily Taylor
University Librarian
(401)863-2162

University of California-Berkeley
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Dorothy Gregor
University Librarian
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University of California-Davis
Davis,California 95616-5292
Marilyn J. Sharrow
University Librarian
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Gloria Werner
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University of California-Riverside
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Riverside, California 92517
James C. Thompson
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University of California-San Diego
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Joseph A. Boissé
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Canada Institute for Scientific &
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Bernard Dumouchel
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11161 East Blvd.
Cleveland, Ohio 44106
D. Kaye Gapen
Director
(216)368-2990

Center for Research Libraries
6050 South Kenwood Avenue
Chicago, Illinois 60637
Donald B. Simpson
President
1-800 621-6044 or (312)955-4545

University of Chicago Library
1100 East 57th Street
Chicago, Illinois 60637-1502
Martin Runkle
Director
(312)702-8744

University of Cincinnati Libraries
Cincinnati, Ohio
45221-0033
David Kohl
Dean and University Librarian
(513)556-1515

University of Colorado Libraries
Campus Box 184
Boulder, Colorado 80309-0184
James F. Williams II
Dean
(303)492-7511

Colorado State University Library
William E. Morgan Library
Fort Collins, Colorado 80523
Joan Chambers
Director
(303)491-1833

Columbia University Libraries
New York, New York 10027
Elaine F. Sloan
Vice President for Information Services &
University Librarian
(212)854-2247

University of Connecticut Library
Storrs, Connecticut 06268
Norman D. Stevens
Director
(203)486-2219

Cornell University Libraries
Ithaca, New York 14850
Alain Seznec
University Librarian
(607)255-3689

Dartmouth College Libraries
Hanover, New Hampshire 03755
Margaret A. Otto
Librarian
(603)646-2235

University of Delaware Library
Newark,Delaware 19717-5267
Susan Brynteson
Director
(302)831-2231

Duke University Libraries
Durham, North Carolina 27706
Jerry D. Campbell
University Librarian
(919)684-2034

Emory University
540 Asbury Circle
Atlanta, Georgia 0322
Joan I. Gotwals
Vice Provost and Director of Libraries
(404)727-6861

University of Florida Libraries
Gainesville, Florida 32611-2048
Dale B. Canelas
Director of University Libraries
(904)392-0342

Florida State University Library
Tallahassee, Florida 32306
Charles E. Miller
Director
(904)644-5211

Georgetown University Library
Washington, D.C. 20057
Susan K. Martin
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(202)687-7425

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Athens, Georgia 30602
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Miriam Drake
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500 Howard Place at 6th Street N.W.
Washington, D.C. 20059
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(312)996-2716

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1408 West Gregory Drive
Urbana, Illinois 61801
David Bishop
University Librarian
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Dean of University Libraries
(812)855-3404

University of Iowa Libraries
Iowa City, Iowa 52242
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(319)335-5868

Iowa State University Library
Ames, Iowa 50011
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Dean of Library Services
(515)294-1442

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Baltimore, Maryland 21218
Scott Bennett
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(410)516-8328

University of Kansas Libraries
Lawrence, Kansas 66045-2800
William J. Crowe
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(913)864-3601

Kent State University Libraries
Kent, Ohio 44242
Don Tolliver
Dean, Libraries and Media Services
(216)672-2962

University of Kentucky Libraries
Lexington Kentucky 40506
Paul A. Willis
Director
(606)257-3801

Laval University Library
Cité Universitaire
Québec, (Québec)Canada G1K 7P4
Claude Bonnelly
Director
(418)656-3451

Library of Congress
Washington, D.C. 20540
James H. Billington
Librarian of Congress
(202)707-5205

Linda Hall Library
5109 Cherry Street
Kansas City, Missouri 64110
Louis E. Martin
Director
(816)363-4600

Louisiana State University Library
Baton Rouge, Louisiana 70803-3300
Jennifer Cargill
Dean of Libraries
(504)388-2217

McGill University Library
3459 McTavish Street
Montreal, Quebec Canada H3A 1Y1
Eric Ormsby
Director
(514)398-4677

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1280 Main Street West
Hamilton, Ontario Canada L8S 4L6
Graham R. Hill
University Librarian
(416)525-9140 Local 4359

The University of Manitoba Libraries
Winnipeg, Manitoba Canada R3T 2N2
Carolynne Presser
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(204)474-8749

University of Maryland Libraries
College Park, Maryland 20742
H. Joanne Harrar
Director of Libraries
(301)405-9127

University of Massachusetts Libraries
Amherst, Massachusetts 01003
Richard J. Talbot
Director
(413)545-0284

Massachusetts Institute of Technology Libraries
Cambridge, Massachusetts 02139
Jay K. Lucker
Director
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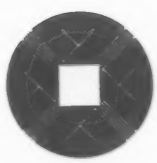

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